A Project Plan: Healthy Work Environment and Unit Culture

Susanne A. Woltschlaeger-Brooks

Michigan State University

College of Nursing

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Table of Contents

Abstract

Background and Review of Literature: A Healthy Work Environment (HWE) has broad implications impacting wellness and retention of team members, recruitment, quality and safety of care delivered, and the overall organizational culture. A review of the literature demonstrates various factors contribute to the presence or absence of a HWE. *Purpose:* The purpose of this evidence-based quality improvement project is to improve the HWE and ultimately decrease team member churn, increase team member belonging and engagement as well as likelihood to recommend on a neuroscience clinical unit within a large midwestern Magnet ® designated hospital. *Methods:* Key interventions were implemented focusing on the fundamental core components of the *IHI Framework for Improving Joy in Work*: camaraderie and teamwork, choice and autonomy, meaning and purpose, and physical and psychological safety. *Implementation Plan / Procedure:* Following the *IHI Framework for Improving Joy in Work*, "What matters to you?" conversations to identify impediments to joy at work were held with team members. Targeted strategies to address impediments were developed and implemented. *Results/Interpretation*: Effectiveness of the *IHI Framework for Improving Joy in Work* was evaluated by comparing pre and post implementation data for rolling twelve month transfer and churn percentage, engagement and belonging scores, and likelihood to recommend. The twelve month rolling transfer and churn percentage decreased from August 2021 to January 2022. Belonging and engagement scores decreased from July 2021 to November 2021. Likelihood to recommend decreased from August 2021 to January 2022. *Implications/Conclusion:* The COVID-19 pandemic impacted the implementation of the *IHI Framework for Improving Joy in Work* as it proved to be a significant disruption impacting overall stress, staffing levels, and tested the resilience of healthcare organizations across the nation. It is recommended that the

neuroscience clinical unit consider continued application of the *IHI Framework for Improving Joy in Work* as a strategy to recover from the COVID-19 pandemic.

Keywords: Healthy work environment, Practice environment, nurs*, turnover, pandemic

A Project Plan: Healthy Work Environment and Unit Culture

The practice environment for nurses is impacted by various factors including the size of an organization, professional hierarchies and relations, leadership characteristics, degree of autonomy and cultural awareness (Numminen et al., 2015). Frameworks have been developed to capture the elements of a Healthy Work Environment (HWE) including the World Health Organization (WHO) *Healthy Workplace Model* which depicts the integration of the physical and psychosocial work environment, personal health resources and enterprise community in relation to leadership engagement and worker involvement (Burton, 2010). In addition, the organizing framework for the *HWE Best Practice Guidelines Project* outlines similar concepts depicting the interplay of external factors (macro level), organizational factors (meso level), and individual factors (micro level), as they transcend across structural policy components, professional occupational components and cognitive/psycho/socio/cultural components ultimately influencing nurse, patient, organizational and societal outcomes (Registered Nurses' Association Ontario [RNAO], 2008). HWEs for nurses are safe, empowering, and satisfying practice settings that augment the health and well-being of the nurse and maximize patient, organizational and societal outcomes (American Nurses Association, 2018; RNOA, 2008). The American Association of Critical-Care Nurses (AACN) has outlined essential standards to ensure a HWE. These standards include skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership (AACN, 2016).

A HWE impacts individual team members, patient outcomes, and the overall organizational culture (Ulrich, Barden, Cassidy, & Varn-Davis, 2019; Wei, Sewell, Woody, & Rose, 2018). The purpose of this evidence-based quality improvement project is to implement the *IHI Framework for Improving Joy in Work* as an evidence-based strategy aimed at improving

the HWE and ultimately improving churn, team member sense of belonging, and engagement on a neuroscience clinical unit within a large midwestern Magnet ® designated hospital. Churn includes all departures from the clinical unit as well as internal transfers to other areas within the organization.

Background and Significance

Lack of a HWE can disrupt the physical and psychological safety of team members, contribute to anxiety, sleep disorders, burnout and emotional exhaustion (Bambi et al., 2018; Ulrich et al., 2019; Wei et al., 2017). Interpersonal relationships, including nurse-nurse, nurse-manager, and nurse-physician, are also impacted ultimately affecting psychological health and overall performance and productivity (Bambi et al., 2018; Ulrich et al., 2019; Wei et al., 2017). In addition, lack of a HWE can result in decreased quality of patient care delivered, including patient risk of death, failure to rescue, and increased likelihood of readmission (Ulrich et al., 2019; Wei et al., 2017). From an organizational perspective, organizations lacking a HWE experience decreased team member job satisfaction and organizational commitment resulting in challenges with retention, decreased productivity, and overall organizational safety (Bambi et al., 2018; Wei et al., 2017). Nursing Solutions, INC (NSI) is a national nursing recruitment firm which surveys over 3,000 hospitals across the United States to evaluate healthcare turnover, retention initiatives, vacancy rates, recruitment metrics and staffing strategies (NSI, 2021). Nationally, in 2020, the hospital turnover rate for registered nurses (RNs) increased by 2.8 % with a national average of 18.7 % (NSI, 2021). Average cost of turnover for a bedside registered nurse (RN) is $40,038 and results in the average hospital losing between $3.6 - $6.5 million annually (NSI, 2021). Each percent change in RN turnover will impact, either positively or negatively, the bottom line by $270,800 annually (NSI, 2021).

Various factors contribute to an unhealthy work environment. Incivility and intimidating, disruptive behaviors negatively impact teamwork, communication, and professionalism within the health care team (Crawford et al., 2019; The Joint Commission [TJC], 2008). In turn, these behaviors result in decreased staff engagement, productivity, and organizational commitment, and an organizational culture which ultimately, if not addressed, negatively impacts patient safety, quality of care and optimal patient outcomes (AACN, 2016; Bambi et al., 2018; Crawford et al., 2019; Perlo, Balik, Swensen, Kabcenell, Landsman, & Feeley, 2017; TJC, 2008; Ulrich et al., 2019; Wei et al., 2017). Recognizing the significance of the work environment in the delivery of safe patient care, regulatory standards and strategies targeting front line team members, nursing leadership, and organizations as a whole, have been created by TJC, The Institute for Healthcare Improvement (IHI) and the AACN to assist health care leaders in creating a HWE.

An adult inpatient neuroscience clinical unit within a large midwestern healthcare system has faced ongoing challenges with turnover with a January 2020 to December 2020 12-month rolling churn rate (includes transfers off clinical unit and those who left the organization) of 58.9% (Human Resources Information Services [HRIS], 2021). In 2020, transfers off the unit increased by 17.6% (HRIS, 2021). In 2019, the total RN orientation hours on this unit were 5,269.70 at an orientation cost of $142,955.99 (HRIS, 2021). In 2020, RN orientation hours increased to 8,024.92 at a cost of $227,413.84 (HRIS, 2021). From January to June 2021, orientation hours were 1,476.55 at a cost of $41,800.37 (HRIS, 2021). The clinical unit has experienced high turnover of nurse managers with four nurse managers over the previous six years, and less than desirable quality indicators including an inpatient fall rate per 1000 patient days of 8.42 (national benchmark at or less than 3.960), inpatient fall with injury rate per 1000 patient days of 0.94 (national benchmark at or less than 0.590), a belonging score of 55 (scale of

100, overall organizational average of 69), and an employee engagement score of 54 (scale of 100, overall organizational average of 72); Patient Quality, Safety, and Experience Department, 2021).

As of May 2021, the clinical unit had approximately 20 open RN positions, having spent over $200,000 in contract labor in January and February of 2021 (HRIS, 2021). Seventy-five percent of the primarily female staff are between the ages of 20-29, 19% are between the ages 30 - 39, and 5% are over the age 40 (HRIS, 2021). Fifty-nine percent of the team members had one year or less tenure (HRIS, 2021). Despite engagement from employee relations and operational leadership, the nurse manager described a continued fundamental lack of trust and a culture of toxic negativity, intimidation and strong lateral violence (V. Tumbleson, personal communication, May 26, 2021).

The practice environment on the unit has faced ongoing challenges and has been described as toxic by the current nurse manager and clinical director. Behaviors such as intimidation, lack of trust in leadership, and lack of individual accountability are deep-seated and pervasive, resulting in ongoing challenges such as RN and Nurse Technician (NT) churn and belonging and engagement scores well below company average (HRIS, 2021). Intentional efforts including clarification of charge RN expectations and accountability, provider and RN collaboration efforts, evaluation of hours per patient day (HPPD), and revision of new hire orientation and ongoing professional development opportunities were paused, and therefore have not had a measurable impact, due to the Coronavirus Disease 2019 (COVID-19) and continued challenges with increased census and patient acuity.

Problem Statement

Despite engagement from operational leadership and human resources, the practice environment on an adult inpatient neuroscience clinical unit within a large mid-western healthcare system continues to face significant challenges. These challenges involve creating and maintaining a HWE as evidenced by significant RN and NT churn and belonging and engagement scores well below company average.

Organizational Assessment Gap Analysis of Project Site

The Fishbone diagram allows for the display of various causes and their impact on the outcome, ultimately assisting in the identification of areas for improvement (IHI, 2021). Using the Fishbone diagram, factors contributing to the climate of the current work environment were identified and organized into the following categories: environment, equipment, people, methods and materials (see Appendix A for Figure 1. Fishbone diagram). For purposes of this evidence-based quality improvement project, the area of focus was on lack of belonging, team member engagement, and unit culture.

The intent of the Strengths/Weaknesses/Opportunities/Threats (SWOT) analysis is to identify strengths and weaknesses internal to the organization as well as opportunities or threats that may contribute to or interfere with the success of the project (Terhaar et al., 2021). The SWOT analysis assisted in outlining the level of engagement of key stakeholders, attributes of the current organizational climate on the clinical unit, and detail surrounding threats to the success of the implementation of the project plan. Key findings from the SWOT which were considered included the strength of high level of engagement from the nursing director, nurse manager, nurse educator and clinical nurse specialist, with a corresponding high level of appreciation for evidence-based strategies. An opportunity to highlight was the fundamental

threat team members expressed to their physical safety, pervasive and embedded negative culture of incivility, lack of trust in leadership and overarching lack of team member engagement (see Appendix B for SWOT analysis).

An element of the gap analysis included a comparison of strategies implemented by the current operational leadership and human resources in comparison to strategies recommended by TJC, IHI and AACN to improve the practice environment (see Appendix C for TJC, IHI and AACN key HWE recommendations in comparison to neuroscience clinical unit implemented strategies). Prior intentions to implement an action plan aimed at improving the climate on the unit have been thwarted by the COVID-19 pandemic, limiting the intervention to three strategies: clarification of charge RN expectations, improved leadership ongoing communication and transparency, and holding team members accountable for identifiable professional behavior concerns.

Purpose of the Project

The purpose of this evidence-based quality improvement project was to implement strategies to influence the four critical components of the *IHI Framework*; physical and psychological safety, meaning and purpose, choice and autonomy, and camaraderie and teamwork (Perlo et al., 2017). Strategies, including “What matters to you?” conversations, development of a communication board, daily huddles and charge nurse team building, were aimed at improving the HWE and ultimately decreasing churn from 58.9% to 50%, increasing team member sense of belonging from 55 to 60, and increasing team member engagement from 54 to 59 on a neuroscience clinical unit within a large midwestern Magnet ® designated hospital by January 2022.

Evidence Based Practice Model/QI Model

The *IHI Framework for Improving Joy in Work* (Perlo et al., 2017) and the Plan Do Study Act (PDSA) model served as the models on which this evidence-based quality improvement project was based. The *IHI Framework* delineates nine core components which contribute to a healthy workforce with happy, healthy, and productive people (see Appendix D Figure 2. *IHI Framework for Improving Joy in Work*). The nine components are real-time measurement, wellness and resilience, daily improvement, camaraderie and teamwork, participative management, recognition and rewards, choice and autonomy, meaning and purpose, and physical and psychological safety. Of these, camaraderie and teamwork, choice and autonomy, meaning and purpose, and physical and psychological safety are fundamental and central to the framework. In addition to these, although not listed as a component of the framework, fairness and equity must also be present. The framework further outlines the responsibility of senior leaders (all nine components), managers and core leaders (five components) and individuals (three components). Specifically, managers and core leaders are responsible for real-time measurement, wellness and resilience, daily improvement, camaraderie and teamwork, and participative management. Individuals are responsible for real-time measurement, wellness and resilience, and daily improvement (Perlo et al., 2017).

The PDSA model was leveraged to guide the implementation and testing of the proposed interventions. The four stages of the PDSA model include planning of the change and observation, implementing the change on a small scale, evaluating the data, and refining the intervention based upon the data gleaned (Fineout-Overholt & Stevens, 2019). The primary interventions for this evidence-based quality improvement project were intended to positively impact the HWE by focusing on the fundamental core components of the *IHI framework*:

camaraderie and teamwork, choice and autonomy, meaning and purpose, and physical and psychological safety (Perlo et al., 2017). The application of the PDSA model allowed for targeted evaluation and refinement of the actionable items on a small scale prior to broader implementation (IHI, 2021).

Review of the Literature

Search Strategy

The Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PubMed of the U.S National Library of Medicine National Institutes of Health databases were searched using the defined key terms/phrases “Healthy work environment” OR “Practice Environment” AND nurs* AND turnover (see Appendix E Figure 3. PRISMA diagram). An academic health sciences librarian was consulted for assistance in development of search terms and strategies as initial search results within PubMed were excessive and irrelevant to the topic of interest. Removal of duplicates resulted in a total of 96 records of which the abstracts were reviewed. This resulted in 37 full text articles, which included nine additional relevant publications identified through reference searches. The 37 full text articles were further assessed for eligibility resulting in the identification of 26 potential articles for inclusion in the synthesis. Further evaluation, including the use of qualitative and quantitative critical appraisal checklists from the Joanna Briggs Institute, was conducted (Lockwood, Munn, & Porritt, 2015; Moola et al., 2020). Eleven research articles were chosen for inclusion in the synthesis (see Appendices F and G for evaluation table and synthesis table themes and outcomes). The following synthesis discusses themes, characteristics and applicable interventions identified as contributing to a HWE and impacting RN sense of belonging, engagement and ultimately churn.

Nursing Practice Environment

Quality leadership, interpersonal relationships, and environmental elements such as supportive structures, access to resources and professional development opportunities, contribute to the overall health of the nursing practice environment (RNOA, 2008; Shirey, 2017). Contextual factors, such as the organizational culture and climate further influence the practice environment at both the macro and micro level respectively (RNOA, 2008; Shirey, 2017). Recognizing the connection between belongingness and job satisfaction to the practice environment, the Practice Environment Scale of the Nursing Work Index (PES-NWI), the Belongingness Scale - Clinical Placement Experience BS-CPE and the Nurse Workplace Relational Environment Scale (NWRES) are tools that have been presented in the literature as a means to evaluate characteristics which contribute to the practice environment (Numminen et al., 2015; Perlo et al., 2017; Reinhardt, León, & Amatya, 2020).

Autonomy

HWE's were shown to have a positive relationship with nurses' perceptions of autonomy (Wei et al., 2018). Furthermore, a positive association was identified between autonomy, decision latitude and job satisfaction (Reinhart et al., 2020; Van Bogaert et al., 2018) and contributes to the overall satisfaction of millennial nurses (O'Hara, Burke, Ditomassi, & Palan, 2019). On the contrary, Nelson - Brantley, Park, and Bergquist-Beringer (2018) identified that nurse participation in hospital affairs did not show a significant association with RN turnover.

Managerial Support

Actual or perceived managerial support and leadership ability was positively associated with RN turnover or intention to leave the role (Nelson - Brantley et al., 2018; Numminen et al.,

2015; Ulrich et al., 2019) and was identified as a key driver in the creation and sustainment of a HWE and in the satisfaction of the millennial nursing workforce (O'Hara et al., 2019; Shirey, 2017). At the macro level, there is a strong positive correlation between overall organizational support and sense of autonomy and job satisfaction (Reinhardt et al., 2020).

Specific leadership attributes such as authenticity, empowerment, giving and receiving of feedback, setting clear expectations, as well as emotional intelligence, competence and vision were identified as qualities of a leader contributing to a HWE and impacting intent to stay (Shirey, 2017; Van Osch et al., 2018). Of interest, Nelson-Brantley et al. (2018) identified that as managerial support increased, RN turnover also increased by 8.3%. The authors attributed this to the belief that supportive managers may encourage team members to advance within the profession of nursing or seek other opportunities within the organization to further develop professionally.

Staffing/Resource Adequacy

Appropriate staffing and access to resources is significantly related to the health and productivity of the work environment including RN turnover, workload, job satisfaction, perceived effectiveness of the front line nurse manager, and RN satisfaction with the quality of care provided (Nelson - Brantley et al., 2018; Numminen et al, 2015; Shirey, 2017; Ulrich et al., 2019; Van Bogaert et al., 2018).

Effective Interpersonal Relations

Camaraderie, teamwork, and a sense of connectedness have been shown to positively impact the perceptions of the practice environment and overall work satisfaction and are identified as key elements within the *IHI Framework* (Numminen et al., 2015; O'Hara et al.,

2019; Perlo et al., 2017; Reinhardt et al., 2020). Leadership styles which embed key values such as respect, honest feedback, open communication and trust contribute to the development of empowering relationships and a safe working environment (RNOA, 2008; Shirey, 2017).

RN Turnover

An inverse relationship was identified between the presence of HWE characteristics such as dedication, staffing, respect from administration and front line management, meaningful relationships, and participation in hospital affairs and RN turnover rates including intention to leave the hospital or intention to leave the profession (Nelson-Brantley et al., 2018; Numminen et al., 2015; Van Bogaert et al., 2018; Ulrich et al., 2019). Emotional exhaustion was shown to be positively associated with intention to leave the hospital and intention to leave the profession (Van Bogaert et al., 2018).

Quality

The overall practice environment including nurse participation in hospital affairs, decision latitude, social capital and staff engagement, impacted RN satisfaction with the quality of care being provided including overall safety (Numminen et al., 2015; Perlo et al., 2017; Van Bogaert et al., 2018; Wei et al., 2018). Of interest, Nelson - Brantley et al. (2018) determined that the subscale of nursing foundations for quality of care on the PES-NWI was highly correlated with RN participation in hospital affairs. Considering this, there was not a significant association between RN participation, and henceforth quality, and RN - physician relations or unit turnover.

Summary

The synthesis of the literature identified key themes, influenced by the actual or perceived presence or absence of managerial support, which contribute to a HWE including autonomy, decision latitude, camaraderie and connectedness, civility, and staffing and resources. There were varying results indicating the impact of engagement in hospital affairs on team member engagement and turnover. From the perspective of quality, the subjective assessment of quality care at the unit level was influenced by nurses who felt empowered and had decision latitude.

Based upon these findings, elements of the *IHI Framework* will be implemented. The underlying premise of the *IHI Framework* is by understanding barriers to joy in work, and focusing on restoring joy, leaders have the ability to engage and partner with team members in creating strategies to influence joy in work ultimately impacting elements such as team member engagement and turnover rates (Perlo et al., 2017).

Goals, Objectives and Expected Outcomes

The following four steps of the *IHI Framework* were implemented as part of this evidence-based quality improvement project on the unit:

1. implement “What matters to you?” conversations with RNs, NTs, unit secretaries and nursing supervisor,
2. identify unique impediments to joy in work,
3. in partnership with manager, commit to making joy in work a shared responsibility,
4. and leverage PDSA to test the approaches in improving joy in work.

The overarching desire was to influence four of the nine components which are critical to the improvement of joy in the workplace (Perlo et al., 2017). Physical and psychological safety,

meaning and purpose, choice and autonomy, and camaraderie and teamwork are foundational to the application of the *IHI Framework.* Considering this, the objective of this evidence-based quality improvement project was to implement strategies targeting the four foundational components with the goal of improving the overall HWE on the unit with an ultimate desired state of improving churn from 58.9% to 50%, belonging from 55 to 60, and engagement from 54 to 59 by January 2022.

The following strategies, targeting the four foundational elements of the *IHI Framework,* were implemented:

Meaning and purpose / Physical and psychological safety

- Over the course of two weeks, in collaboration with nurse manager, "What matters to you?" conversations with RNs, NTs, unit secretaries, and supervisors on the neuroscience clinical unit were implemented. Conversations were intended to assist in identifying "bright spots" in the work environment as well as impediments or "pebbles in their shoes" (Perlo et al., 2017, p. 8).
- A communication board, functioning as a daily visual management tool, was created and implemented based upon feedback from team members. The board made visible impediments identified during "What matters to you?" conversations, as well as function as a tool to add additional impediments and ideas for improvement as they arise. Additionally, daily bright spots were celebrated on the communication board.
- A structure for daily huddles and review of the communication board was developed and implemented.

Choice and autonomy

- Daily huddles, communication board and charge nurse meetings were leveraged as a forum to solicit ongoing input and feedback from team members on the status of addressing prioritized impediments.
- "What makes today great" was implemented during daily huddles (led by charge nurses).

Camaraderie and teamwork

- Charge nurse team building activities to start each charge nurse meeting were developed and implemented by the doctoral student.
- The doctoral student collaborated with charge nurses to solicit input / feedback from team members on prioritized impediments and strategies to address them during daily huddles.

Methods

Project Site and Population

The selected unit was a 38-bed inpatient neuroscience clinical unit which provides care for general neurology, neurosurgical and medical/surgical patients age 19 and older. The average daily census (ADC) is 35. The primary admission codes served by the unit during 2019 through March 2021 were epilepsy and seizure disorders, brain and central nervous system cancer, and ischemic stroke (see Appendix H for top 10 ICD admission codes served by the neuroscience clinical unit during 2019 through March 2021). The neuroscience clinical unit team is comprised of 47.71 Full Time Equivalents (FTEs) including 35 RNs for a total of 30.21 FTEs (see Appendix I for primary roles, headcount and FTE allocation). As of June 2021, there were 18.9 open RN requisitions with a current 38% vacancy rate. In respects to Integrated Disability

Management (IDM) in calendar years 2019 and 2020, there were 54 injuries reported resulting in 1,178 total lost days and 219 total restricted days (IDM, 2021).

Metrics. Metrics are leveraged to evaluate the impact of the care provided on the neuroscience clinical unit and the overall contribution to ensuring the organization's mission to improve health, inspire hope and save lives, is achieved. Metrics such as patient and team member satisfaction are indicators of the status of the clinical unit in driving toward meeting the overall organizational mission.

Patient experience. In respects to patient experience, the neuroscience clinical unit continues to face opportunities. The health care organization leverages the Quality, Safety and Experience Grade Point Average (GPA) scale to measure and evaluate quality, safety and experience against industry peers (Elmouchi, 2020). The GPA scale leverages the following methodology: 1.0 reflects metrics falling below the 50th percentile nationally; 2.0 - 2.9 is between the 50th - 75th percentile nationally; 3.0-3.9 is between the 75th and 89th percentile; and 4.0 is greater than the 90th percentile. During the rolling performance period of October 2020 thru May 2021, the Neuroscience clinical unit had a likelihood to recommend GPA of 1, which is below the 50th percentile. In May 2021, with 23 survey respondents, the likelihood to recommend score increased from April 55.6% to 78.3%, which is a GPA of 3, between the 75th - 89th percentile. For the 2021 calendar year performance period patient satisfaction scores, in respects to communication with nurses, the neuroscience clinical unit had a GPA of 1, below the 50th percentile.

Team member engagement. The organization leverages the Glint employee listening survey to evaluate team member engagement six times annually. The March 2021 neuroscience clinical unit team member engagement survey had a 62% response rate with an overall

engagement score of 56, which is an increase of 2 from the prior survey. Company, meaning the healthcare organization as a whole, had an overall response of 60% with an average engagement score of 74. Categories within the employee engagement survey such as feedback, empowerment, recognition, engagement, belonging, and resources align with concepts of a HWE (see Appendix J for employee engagement scores March 2021 listening survey aligned with HWE concepts). From an organizational perspective, the unit based goal, determined by the clinical nursing director and based upon employee engagement scores in the fourth quarter of 2020, is to improve the belonging score from 46 to 51 by December 2021.

Ethical Considerations/Protection of Human Subjects

Michigan State University Internal Review Board (IRB) approval was obtained prior to initiating this evidence-based quality improvement Doctorate of Nursing Practice Project (see Appendix K MSU IRB). The official IRB Determination Form was submitted upon proposal approval. This evidence-based quality improvement project did not involve any component of research nor did it identify, access, or utilize any protected health information. Participants impacted by the interventions implemented as elements of the *IHI Framework* were team members including RNs, NTs, unit secretaries, and a nursing supervisor who report to the clinical nurse manager on the neuroscience clinical unit. The interventions implemented were consistent with other interventions that operational leaders could choose to independently initiate within their clinical spaces in an attempt to improve team member belonging, engagement and ultimately team member churn. The *IHI Framework* did not expose the clinical team members of the neuroscience clinical unit to any greater risk than they would encounter as a part of a usual clinical shift on the neuroscience clinical unit or as an employed team member of this large midwestern Magnet ® designated hospital. As a result, the organizational IRB deemed the

project as non-human research and therefore did not require full review by the organizations IRB (see Appendix L Spectrum Health IRB). Benefits to this evidence-based quality improvement project included the utilization of a defined framework and quality improvement model for implementation and evaluation of recommended interventions, potential improvement in team member sense of belonging, engagement and ultimately churn as well as an increase in likelihood to recommend.

Setting Facilitators and Barriers

As previously described, the neuroscience clinical unit is an inpatient unit within a large midwestern, Magnet ® designated hospital. Implementation of the interventions intended to impact team member sense of belonging, engagement and ultimately churn required interactions with front line clinical team members as well as unit leadership, including the nurse manager, clinical director, nurse educator, clinical nurse specialist and nurse supervisor. Interactions with personnel included:

- Partnering with nurse manager to prepare for “What matters to you?” conversations.
- Facilitating “What matters to you?” conversations with team members including charge nurses, travel RNs, nursing supervisor and nurse manager.
- Partnering with nurse manager, charge nurses, nursing supervisor and team members to prioritize impediments identified during “What matters to you?” conversations.
- Attending monthly charge nurse meetings and facilitating team building activities.

- Participating in daily huddles to mentor charge nurses in soliciting input and feedback from all team members in addressing prioritized impediments identified from “What matters to you?” conversations.

Time, dedication, patience and commitment were necessary in order to effectively influence a positive change in the HWE. The neuroscience clinical unit culture is deep-seated and pervasive, which will require perseverance to successfully influence. Strong engagement, commitment and eagerness from unit leadership as well as human resources were key facilitators to the implementation of the *IHI Framework*. Resources required for the successful implementation of the interventions included time, space for meetings and team building activities, and supplies for the creation of the communication board. A constraint which was considered was the availability of adequate time to develop relationships with team members in order to build trust and successfully engage them in the “What matters to you?” conversations as well as the prioritization of the identified impediments to joy in work and implementation of interventions to address impediments. Potential team member engagement and buy-in was considered the fundamental barrier to the success of the implementation of this evidence-based quality improvement project.

Facility support to implement the above mentioned interventions as part of the evidence-based quality improvement project was obtained (see Appendix M for facility letter of support).

The Intervention and Data Collection Procedure

The PDSA model provided the framework for the implementation and ongoing evaluation of this evidence-based quality improvement project. The *IHI Framework* is based upon four steps for leaders:

1. Ask staff, “What matters to you?”

2. Identify unique impediments to joy in work in the local context.
3. Commit to a systems approach to making joy in work a shared responsibility at all levels of the organization.
4. Use improvement science to test the approaches (Perlo et al., 2017, p. 8).

A Gantt chart (see Appendix N for Gantt chart) provides detail of the interventions in relationship to the defined timeline. Overall, "What matters to you?" conversations with team members of the Neuroscience clinical unit provided insight into what team members identify as impediments to their work and ultimately negatively impacting the health of the environment. Initially, upon development of the project proposal, the impediments identified during the "What matters to you?" conversations were to be prioritized with the charge nurses and then with all team members. Strategies to address the impediments were then to be created by all team members and implemented. The use of daily huddles, the communication board, and defined process and outcome measures, allowed for the ongoing evaluation of the impact of the interventions and provided insight on areas where refinement may be necessary. In addition to the nurse manager and nurse supervisor, charge nurses are identified as informal operational leaders on the neuroscience clinical unit. Recognizing this, team building activities were implemented with the charge nurses as they, alongside the nurse manager, facilitated daily huddles which solicited input and feedback from all team members in response to the prioritized impediments and strategies for improvement. As noted in the timeline (see Appendix N for Gantt chart), many of the interventions overlapped and occurred in tandem with one another. The following lists the primary interventions:

- Implementation of "What matters to you?" conversations with all team members. Identify "what makes a good day" and "what are pebbles in your shoes?" The doctoral student facilitated the "What matters to you?" conversations.
- Input and feedback was solicited from all team members during the "What matters to you conversations?" to solidify prioritization of impediments and identification of strategies to implement during daily huddles.
- The doctoral student created and implemented a daily visual management strategy, communication board, to make visible identified impediments and associated strategies to address.
- "What makes today great" and "pebbles in your shoes" was incorporated into the daily huddle. The doctoral student partnered with the nurse manager in coaching charge nurses in soliciting input and feedback from team members during daily huddles.
- In order to develop charge nurses as a team, charge nurse team building activities, developed and led by the doctoral student, were included in monthly charge nurse meetings.

The goal of this evidence-based quality improvement project was to improve the overall HWE on the neuroscience clinical unit with an ultimate desired state of improving churn from 58.9% to 50%, belonging from 55 to 60, and engagement from 54 to 59 by January 2022. The communication board allowed for an in the moment pulse on the impact of the defined interventions. Outcome measures, including RN and NT churn rate, turnover rate, belongingness score, and engagement score were evaluated on a monthly basis from

August 2021 to January 2022. In addition, likelihood to recommend as a counterbalance measure was evaluated during the same timeframe.

Timeline

A Gantt chart (see Appendix N for Gantt chart) outlines the timeline for this evidence-based quality improvement project in detail.

Measurement Instruments/Tools

Recognizing that no single validated measure of joy in work has been identified, system and local measures can be considered to evaluate progress in achieving joy in work (Perlo et al., 2017). Examples of system level measures include team member satisfaction, engagement, burnout, turnover, retention, employee wellbeing, workplace injuries, or absenteeism (Perlo et al., 2017). From a local perspective, measurement is focused on real time evaluation of daily or weekly improvements which are initiated and tracked by the team members and unit leaders.

The primary and secondary outcome measures, process measures, and counterbalance measures which were monitored to evaluate the impact of this evidence-based quality improvement project, and the tools which were leveraged, are as follows:

Outcome measures.

Primary.

- Overall churn rate [RNs and NTs who left the clinical unit, retrievable through human resources information services (HRIS)]
- RN churn rate [number of RNs who have left the clinical unit, retrievable through HRIS]

- Overall belongingness score [Glint employee listening survey, measured 6 times annually, retrievable from unit leadership]
- Overall engagement score [Glint employee listening survey, measured 6 times annually, retrievable from unit leadership]

Secondary.

- Overall turnover rate [RNs and NTs who left the health system, retrievable through HRIS]
- RN turnover rate [number of employees who have left the health system, retrievable through HRIS]
- NT churn rate [retrievable through HRIS]
- NT turnover rate [retrievable through HRIS]

Process measures.

- Daily visual management in the form of a communication board to capture "bright spots" and "pebbles in your shoe"

Counterbalance measures.

- Likelihood to recommend [Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), available monthly, retrievable from unit leadership]

Implementation

The authoring of the project proposal occurred in Spring/Summer of 2021. On May 17th , which was the start of the academic calendar, the seven day average for new reported COVID - 19 cases in Michigan was 1,992. On August 19, 2021, completion of the semester, the seven day average for new reported cases was 1,539. The initial "What matters to you?" conversation took

place on September 20, 2021 which had a seven day average for new reported COVID - 19 cases of 3,233. The kick-off of the "Bright Spots Communication Board" occurred on October 13, 2021, which had a seven day average for new reported COVID - 19 cases of 4,393 (The New York Times, 2021). In November 2021, the healthcare organization was facing extremely high census with a record setting inpatient volume of 1,134 equating to 100.53% capacity in non-overflow beds and 90.21% capacity when considering the opening of 79 total overflow beds (M. Vincent, personal communication, December 7, 2021). In addition, the organization experienced a gradual increase in length of stay with a peak average length of stay of 5.02 days in October 2021 in relation to an average length of stay of 4.38 in June 2021 (M. Vincent, personal communication, December 7, 2021). On November 17th, the hospital system had 359 hospitalized COVID-19 patients, 81 of which were in the intensive care unit, and 59 of those patients on a ventilator (Bulson, 2021). On November 18th, the healthcare system's command center transitioned to red status for the first time since the onset of the pandemic in March 2020 (Elmouchi, 2021).

The purpose of this evidence-based quality improvement project was to improve the overall HWE with the implementation of the *IHI Framework* and ultimately improving churn from 58.9% to 50%, team member belonging from 55 to 60, and team member engagement from 54 to 59 on a neuroscience clinical unit within a large midwestern Magnet ® designated hospital by January 2022. At the time of actual project implementation, these metrics were as follows:

- In August 2021, the rolling 12 month churn for RN and NT combined was 55.2%
- In July 2021, team member belonging was 55 (12 below company)
- In July 2021, team member engagement was 51 (18 below company)
- In August 2021, likelihood to recommend: 69.7%

Initially, the "What matters to you?" conversations were intended to be held with groups of team members in like roles. Specifically, charge nurses and the nursing supervisor together and separate conversations with the remaining team members. For ease of scheduling, and to allow team members more options to choose from that would work with their schedule, sessions were open to all team members regardless of role. Twenty percent of the total RNs on the clinical unit were travel RNs, and they were also invited to participate.

Unlike the *IHI Framework* six, rather than one, "What matters to you?" conversations were facilitated by the doctoral student during the week of September 20th. The nurse manager of the neuroscience clinical unit was present at all sessions. Zero to 7 team members participated in each session, either virtually via Microsoft TEAMS© or in person, with a total of 14 participants over six sessions. Team members included RNs, NTs, unit secretaries, and the inpatient supervisor. A script was developed to facilitate the discussion (see Appendix O "What matters to you?" script).

The intent of the "What matters to you?" conversations was to identify unit specific "bright spots" as well as "pebbles in your shoes" and to engage team members in the development of strategies to increase "bright spots" and decrease "pebbles." Based upon discussion and feedback from the "What matters to you?" conversations, the Bright Spots Communication Board (see Appendix P Bright Spots Communication Board) was created. The prototype of the Bright Spots Communication Board (board) was active on October 13, 2021. The purpose of the board is to display the "bright spots," "pebbles in your shoes," and the strategies to increase "bright spots" and chip away at the "pebbles in your shoes" which were identified during the initial "What matters to you?" conversations. The board is intended to show progress in achieving these strategies as well as allow the opportunity to identify "bright spots"

and “pebbles in your shoes” twice daily during already established measurement for daily improvement (MDI) team huddles.

In the initial project plan, the intent was to engage charge nurses in setting priorities, and developing associated strategies to address the “pebbles in your shoes” based upon the outcome of the six “What matters to you?” conversations. However, as the conversations evolved, it became apparent that each session was identifying similar “pebbles.” Therefore, prioritization by the charge nurses was not needed. Input from participants was gathered during each conversation to identify strategies on how to best address the “pebbles.”

The primary areas of opportunity identified during the conversations were related to staffing and supplies (see Appendix Q Summaries of “What matters to you?” conversations). Staffing concerns shared included having insufficient team members to care for the patient census on the unit, charge nurses in full patient care assignments while also functioning in support roles such as unit secretary in addition to maintaining charge nurse responsibilities and, competency of team members pulled to the neuroscience clinical unit. From a staffing perspective, the facilitator directed the conversation toward what is the role of the team in staffing the neuroscience clinical unit and how could the presence or absence of a welcoming environment impact the stability of the neuroscience clinical unit team. Discussion evolved into defining characteristics of an environment which would entice pull nurses, nursing students and new graduate float pool nurses to work on the neuroscience clinical unit. Opportunities identified during the conversations focused on creating a welcoming environment and included setting expectations for charge nurses in greeting non - unit based staff to the unit including an intentional check-in by the charge nurse with non - unit based staff. In addition, the use of “pull cards” was resurrected. Pull cards are pocket sized cards intended for distribution to team

members who have been pulled to the neuroscience clinical unit. The cards were refreshed and revised and can be used to provide helpful information to those not familiar with the unit (see Appendix R for Pull Card Front and Back). The charge nurse is to ensure that all team members pulled to the neuroscience clinical unit receive the pull card. Due to a delay within the organizations document services department, as well as multiple competing priorities within the organization, the pull cards intended for distribution by the charge nurses to team members pulled to the Neuroscience clinical unit were not available until mid - November at which time distribution began.

Over the course of the past two years, availability of supplies has become a significant "pebble" on the neuroscience clinical unit. Daily frustrations team members face on the neuroscience clinical unit related to availability of supplies are beyond the challenges faced within the hospital due to the impact of the pandemic on supply chains across the nation. For example tubing for a patient controlled anesthesia pump, which was no longer used within the organization, was available on the unit whereas tubing needed for an epidural pump that was used within the organization was not. Recent changes in personnel responsible for the maintenance of supplies on the unit has likely contributed to the inconsistent availability of supplies needed, proper stocking of supplies, and overall maintenance/inventory of supplies. The addition of the supplies section on the board is intended to assist the nurse manager and charge nurses in in-the-moment identification of what supplies team members are missing during their shift as well as what supplies they have that they never use. Sticky notes and dry erase markers are available on the board for team members to either fill out in the moment and stick on the board or write directly on the dry erase board. The nurse manager and charge nurses are able to grab the sticky notes and align the supply needs in a much more timely fashion. This has also

assisted in highlighting the timeliness of addressing identified gaps in supply inventory and escalation to appropriate leadership within supply chain services. The focus of the board changes as “pebbles” are resolved and new one’s form.

Charge nurses are considered a part of the leadership team for the neuroscience clinical unit. Monthly meetings with the nurse manager, supervisor and charge nurses are scheduled by the nurse manager and focus on key goals and objectives for the neuroscience clinical unit at the given time. During the timeframe from September 2021 - February 2022 charge nurse meetings focused on elements of the *IHI Framework* and building teamwork, developing charge nurses in aspects of leadership, and setting role expectations. It was the expectation that the charge nurses would facilitate the review of the board twice daily during MDI huddles. To assist with team building, the doctoral student developed and implemented team building activities intended for each charge nurse meeting scheduled during this time frame. In addition, the doctoral student leveraged charge nurse meetings to provide guidance on how to facilitate the board during huddle. Expectations were also set by the nurse manager and doctoral student in defining the role of the charge nurse in creating and contributing to a HWE.

One charge nurse was in attendance for the September meeting. The nurse manager attributed this to a break in communication and failure to include a link to a virtual meeting in the body of the invite. As a result, the September meeting was cancelled. One week prior to the October charge nurse meeting, the nurse manager sent an email to charge nurses reiterating expectation to attend either via Microsoft Teams © or in person. The focus of the October charge nurse meeting was team building and an introduction to the role of the charge nurse in facilitating the board during daily huddles. The October team building activity, facilitated by the doctoral student, had each charge nurse share one word they strongly associated with and why.

In addition, the charge nurse expectation document (see Appendix S Facilitating Bright Spots Communication Board Charge Nurse Guide) was reviewed with the charge nurses and inpatient supervisor by the doctoral student and reiterated by the nurse manager. “Hope” was one term shared by more than one charge nurse during the October charge nurse meeting. During the December charge nurse meeting, the doctoral student reflected on the October meeting and asked the charge nurses to share their hope for the neuroscience clinical unit team and what could they do to contribute to achieving this goal. Participants were asked to write their thoughts down as well as share with the team. The nurse manager shared the thoughts, anonymously, in a unit newsletter. Due to staffing and unit census, the January charge nurse meeting was cancelled. In February, the unit manager reminded the charge nurses of what they had shared in December in respect to what they hoped for the neuroscience clinical unit and how they were going to contribute to achieving this goal. The doctoral student asked the charge nurses to reflect on the previous two months and share an example of when they supported or encouraged a team member that contributed to achieving what they had hoped for the neuroscience clinical unit as well as share a scenario where, in reflection, they might have taken a different approach.

Implementation of the twice daily review of the board during huddle began the day following the October charge nurse meeting in which they received instructions on facilitation of the board. The charge nurses facilitate review of the board twice daily, 11:00 and 23:00. To assist in ongoing coaching and development of the charge nurses, the nurse manager, inpatient supervisor and the doctoral student participated in huddles when feasible. Specifically, the doctoral student rounded on the neuroscience clinical unit weekly connecting with the charge nurse for that particular day and the nurse manager, to debrief on the use of the board as well as participate in the 11:00 huddle. During the February charge nurse meeting, the charge nurses

reflected on the continued use of the board. There was unanimous agreement of the positive impact of the board both in regards to highlighting of the “bright spots” as well as the “pebbles in my shoe.” There was discussion surrounding the location of the board, as it is currently visible to patients and family members.

Analysis

Effectiveness of the implementation of the *IHI Framework* on the neuroscience clinical unit was evaluated by comparing pre and post implementation data for rolling twelve month transfer percentage, rolling twelve month churn percentage, engagement score, belonging score, and likelihood to recommend.

As previously mentioned, the organization implemented various strategies to stabilize an extremely volatile workforce during the COVID - 19 pandemic. When evaluating the impact of the *IHI Framework,* the assessment of turnover, churn, belonging and engagement scores beyond the neuroscience clinical unit was warranted. Comparison to like units, either in size or patient population, allowed the opportunity to consider the potential impact of the *IHI Framework* in light of the COVID -19 pandemic as well as stabilization efforts implemented across the organization.

Turnover and Churn

Turnover, as defined by the organization, includes team members who have left the organization. Twelve month rolling transfer percentage was leveraged to assess RN, NT and overall turnover from the neuroscience clinical unit. Churn includes turnover as well as those who remained within the organization but transferred from one clinical area to another. Twelve month rolling churn percentage was evaluated to assess RN, NT and overall churn on the

neuroscience clinical unit. Implementation of the *IHI Framework* began in September 2021. Therefore, August 2021 was considered the pre-implementation data point in evaluating turnover and churn and October, November, December 2021 and January 2022 were considered post implementation data points.

Overall, RNs and NTs combined, the twelve month rolling transfer percentage for the neuroscience clinical unit decreased from August 2021 to January 2022 (see Appendix T Neuroscience Clinical Unit Rolling Twelve Month Transfer Percentage). That said, the RN twelve month rolling transfer percentage increased at the time of project implementation, showed a slight decrease in November of 2021, followed by a peak in December 2021. In January 2022, however, the RN rolling transfer percentage decreased to the lowest percentage since pre project implementation. Nurse technician's also experienced an increase in rolling twelve month transfer percentage with a decrease noted in January 2022.

Evaluation of the twelve month rolling churn percentage, for RNs and NTs of the neuroscience clinical unit, during the same time period, revealed an initial increase with a peak in December 2021 (see Appendix U Neuroscience Clinical Unit Rolling Twelve Month Churn Percentage). This was followed by a decrease in January 2022. The twelve month rolling churn percentage for the RN indicated an initial increase in September followed by a slight dip in October 2021. November and December 2021 reflect an increase in the twelve month rolling churn percentage followed by a decrease in January 2022. The RN rolling twelve month churn percentage in January was the lowest since project implementation. NTs' experienced an increase in the twelve month rolling churn percentage over the course of project implementation.

Recognizing the potential broader impact of the pandemic, turnover and churn from the neuroscience clinical unit was compared to three additional clinical units within the healthcare organization. Unit A and Unit B were considered comparable in size whereas Unit C was comparable in patient population served.

As stated, the neuroscience clinical unit experienced an increase in the overall twelve month rolling transfer percentage in September and October 2021 followed by a slight dip in November 2021 and then increase in December 2021 (see Appendix V Comparison of Like Units Twelve Month Rolling Transfer Percentage). January showed a decrease in twelve month rolling transfer percentage which was below the August 2021 transfer percentage. Unit A, comparable in size, experienced an increase in twelve month rolling transfer percentage from August 2021 through January 2022. Unit B, also comparable in size, experienced a similar pattern as the neuroscience clinical unit with an initial increase in twelve month rolling transfer percentage followed by a decrease in October and November and then increase in December and January with the January data point being greater than August 2021. Unit C, comparable in patient population served, also experienced an increase in twelve month rolling transfer percentage. The twelve month rolling transfer percentage was lower in January 2022 in comparison to August 2021 for the neuroscience clinical unit. Units A, B and C all experienced an increase from August 2021 to January 2022.

In respects to twelve month rolling churn percentage, the neuroscience clinical unit experienced an overall increase from August through December 2021. This was followed by a decrease in January 2022 (see Appendix W Comparison of Like Units Twelve Month Rolling Churn Percentage). Both Units A (size) and C (population) experienced increases in twelve month rolling churn percentage whereas Unit B (size) saw an increase from August to

September, saw a dip in October and November, followed by an increase in January. The neuroscience clinical unit was the only unit to see a decrease in the twelve month rolling churn from December 2021 to January 2022. The January 2022 twelve month rolling churn percentage was 6% greater than the August 2021 percentage. In comparison, Unit A, B and C increases from August 2021 to January 2022 were 9.2%, 27.6% and 14.7 % respectively.

In summary, the neuroscience clinical unit experienced a decrease from October to November in both overall and RN twelve month rolling transfer percentage. Unit B (size) also experienced an overall decrease in both October and November. Units A, B and C experienced an increase in overall transfer percentage from August 2021 to January 2022. In respects to twelve month rolling churn percentage, the neuroscience clinical unit, Units A, B and C all experienced an increase in the twelve month overall rolling churn percentage from August 2021 to January 2022. However, the neuroscience clinical unit experienced the lowest increase. The neuroscience clinical unit did not experience gradual improvement in turnover or churn during the project implementation timeframe. The turnover and churn experienced by the neuroscience clinical unit, as well as Units A, B, and C is consistent with what was seen across the nation as the pandemic worsened RN turnover in academic medical centers, community hospitals and health systems (Grimley, Gruebling, Kurani, & Marshall, 2021).

Although the neuroscience clinical unit itself was not a dedicated COVID - 19 unit, there were multiple units within the hospital which were. From an organizational perspective, this resulted in a shift of resources to support COVID - 19 designated units while shifting other patient populations from newly COVID-19 designated units to other clinical units within the hospital system. In an attempt to stabilize the extremely volatile nursing workforce the organization implemented various compensation packages in the fall of 2021. The compensation

packages included the activation of a $10,000 RN sign on bonus and a $12,000 RN retention bonus for select clinical areas in September and October, respectively. The recruitment bonus includes a two year commitment on the unit to which one was hired, whereas with the optional retention bonus, participating RNs sign a promissory note to stay on their current unit through December 2022. Team members who accepted the retention bonus were required to pay back the full amount if they transferred from their unit, or left the organization, prior to January 2022. They were expected to pay back half the amount if they were to transfer or leave the organization between January 2022 and December 2022. Approximately 88% of RNs (29/33) on the neuroscience clinical unit and 91% of eligible RNs across the organization chose to participate in the retention bonus (B. Minnesma, personal communication, December 12, 2021). In addition, in September 2021, wage adjustments were implemented impacting both the RN and NT workforce. Despite the implementation of the RN recruitment and retention incentives, the organization experienced ongoing challenges with stabilization of the workforce. These initiatives may have stabilized the twelve month rolling transfer and churn percentages. In addition, as previously stated, in November the healthcare system's command center transitioned to red status for the first time since the onset of the pandemic in March 2020. This was in response to record setting census, high patient acuity, including extremely high COVID - 19 patient population and significant staffing challenges. This reality may have contributed to the increase in twelve month rolling transfer and churn percentage across the clinical units.

In addition, RN vacancy rate and number of travel RNs are variables to consider when interpreting turnover and churn. It would be expected that a unit with a higher vacancy rate or with greater number of travel RNs would experience a decrease in turnover or churn as there are less employees to actually depart from the unit. Although the neuroscience clinical unit

experienced a decrease in rolling transfer and churn percentage from December 2021 to January 2022, the neuroscience clinical unit had the most travel RNs per month from August 2021 thru January 2022 in comparison to units A, B and C (see Appendix X Travel RN Headcount per Unit by Month). Unit A (size) did not have travel RNs at any point (J. Coble, personal communication, February 23, 2022). In August 2021, there were 56.0 travel RN FTEs within the healthcare organization. This gradually increased to 185.0 travel RN FTEs the end of January 2022 (J. Brandt, personal communication, February 23, 2022).

Although the neuroscience clinical unit had the highest number of travel RNs from August 2021 - January 2022, they did not consistently have the highest RN vacancy rate in comparison to Units A, B and C (see Appendix Y Figure 4. RN Vacancy Percentage). Unit C (population) maintained a higher overall RN vacancy rate from August 2021 - January 2022 (L. Lenhardt, personal communication, February 23, 2022). Lastly, the data analysis did not consider turnover or churn influenced by academic progression such as NTs transitioning into the RN role or bedside RNs transitioning into an advanced practice clinician or a leadership role. Although the neuroscience clinical unit did not experience an overall improvement in turnover or churn during the project implementation timeframe they did experience a decrease in both twelve month rolling transfer and churn percentage from December 2021 to January 2022. Unlike RNs, NTs did not receive monetary recruitment or retention incentives.

Engagement and Belonging

Engagement and belonging were measured via the Glint employee listening survey. The Glint employee listening survey includes up to 16 questions and is launched six times annually to all team members within the healthcare organization. Engagement is assessed with the question "How happy are you working at [organization name]?" and belonging is evaluated with the question "I feel a sense of belonging at [organization name]." Due to the pandemic, the September 2021 engagement survey was not deployed. As a result, the July 2021 data point reflects team member engagement and belonging prior to implementation of the *IHI Framework* and the November 2021 data point reflects team member engagement and belonging post implementation.

Belonging and engagement was evaluated for RN and NT role overall as well as RN and NT roles individually. The neuroscience clinical unit experienced a decrease in both belonging and engagement scores from July 2021 to November 2021. The RN response rate in November, however, decreased from 77% in July to 58% in November. In comparison to units A, B, and C, the neuroscience clinical unit experienced the lowest overall (including RNs and NTs) belonging score in July 2021 followed by the lowest overall belonging score in November 2021. The neuroscience clinical unit also experienced the greatest overall decrease, decreasing by 5, from July to November 2021 in comparison to the other like units (see Appendix Z Figure 5. Belonging Overall).

In evaluating the RN and NT roles individually, the RN belonging score from July 2021 to November 2021 remained unchanged at 49 for the neuroscience clinical unit. Although unchanged, the RN belonging score for the neuroscience clinical unit was lower in comparison to like units (see Appendix AA Figure 6. Belonging RN). The belonging score decreased from July

2021 to November 2021 for all comparable units with the exception of Unit C, comparable in patient population. NT belonging scores also decreased from July 2021 to November 2021 for all clinical units with the exception of Unit B (size), which remained stable (see Appendix BB Figure 7. Belonging NT).

In respects to engagement, in comparison to units A, B, and C, the neuroscience clinical unit experienced the lowest overall (including RNs and NTs) engagement score in July 2021 followed by the lowest overall engagement score in November 2021. Like the neuroscience clinical unit, Unit B (size) also experienced a decrease in engagement. Units A (size) and C (population), however, remained stable from July to November (see Appendix CC Figure 8. Engagement Overall).

In evaluating the RN and NT roles individually, the RN engagement score decreased from July 2021 to November 2021 for the neuroscience clinical unit as well as Unit B (size). Unit A (size) remained unchanged, whereas Unit C (population) experienced an increase from July to November (see Appendix DD Figure 9. Engagement RN). NT engagement scores also decreased from July 2021 to November 2021 for all clinical units with the exception of Unit B (size), which experienced an increase (see Appendix EE Figure 10. Engagement NT).

As previously stated, in addition to impacting twelve month transfer and churn percentage, the presence of travel RNs may also influence the sense of belonging and engagement for employees of the organization. As the number of travel RNs increase on a clinical unit, the development of relationships between team members may be impacted. This could be attributed to the contract type nature of travel RN employment. From August 2021 to January 2022, the neuroscience clinical unit had the most travel RNs each month in comparison to like units with November, the time the Glint employee listening survey was launched, having

the most travel RNs (see Appendix X Travel RN Headcount per Unit by Month). In addition, the recruitment and retention strategies implemented by the organization targeted RNs and did not include NTs.

Likelihood to Recommend

Likelihood to recommend (LTR) is evaluated with the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) question "Would you recommend this hospital to your friends and family?" In August of 2021, pre-implementation of *IHI Framework,* 69.7% of neuroscience clinical unit patient respondents (n=33) replied to the question "Would you recommend this hospital to your friends and family?" in the "top box" with "yes, definitely." During the month of project implementation, September, the percentage of respondents who responded with "yes, definitely" increased to 94.7% (n = 19). Unfortunately, October LTR decreased to 54.6% (n=33) followed by an increase to 60.9% in November. However, December "top box" decreased to 40.70% (n=27) and then increased in January 2022 to 63.8% (n=47) (see Appendix FF Comparison of Like Units Likelihood to Recommend Top Box Performance).

Based upon an evaluation of national data, Press Ganey (2021) identified an overall decline in perceptions of care across all care settings since March of 2020, including "likelihood to recommend." Of interest, patients with COVID-19 were more likely to definitely recommend a hospital in comparison to patients without COVID - 19 (Press Ganey, 2021).

Recognizing the impact of the pandemic on perceptions of care and patient satisfaction nationally, units comparable in size or patient population to the neuroscience clinical unit were also evaluated (see Appendix FF Comparison of Like Units Likelihood to Recommend Top Box Performance). Consistent with the neuroscience clinical unit, Units A and B, comparable in size, saw an initial increase in "top box" performance from August to September 2021. The

neuroscience clinical unit, Unit A (size) and Unit C (population) all experienced an increase in LTR from October to November followed by a decrease in December and an increase in January. This was unlike Unit B (size) which saw a slight decrease from October to November and then increases in both December and January.

The December decrease in LTR for the neuroscience clinical unit, Unit A (size) and Unit C (population) corresponds with the healthcare system transitioning from yellow to red, crisis status, in response to the pandemic as well as increased twelve month rolling transfer and churn percentages for all clinical units evaluated. In addition, the neuroscience clinical unit experienced the greatest number of travel RNs in November and December. Unit A (size), who had the greatest LTR for November and January, did not have travel RNs.

Sustainability Plan

In addition to significant nurse leader engagement from the neuroscience clinical unit, integration of the review of the board during MDI huddles contributed to the successful sustainability of the project. Daily review of "bright spots" and "pebbles in my shoe" continues despite the turnover of seven charge nurses, three from nights and four from days, as well as the doctoral student being on holiday break, and therefore not present on the neuroscience clinical unit, from December 13, 2021 to January 10, 2022. Key elements contributing to the success of the board include engagement and expectation setting from the nurse manager, embedding review of the board during established MDI huddles, and charge nurse perceived value of review of "bright spots" and "pebbles in my shoe." In addition, the nurse manager discusses the board during charge nurse meetings, particularly focusing on "pebbles in my shoe" and progress toward resolving identified issues. The pull cards created to assist team members pulled to the neuroscience clinical unit were sent to document services for formatting and assignment of a

document number. This allows the unit secretary the ability to simply order copies of the cards and have them delivered to the unit ready to use. Lastly, ongoing monthly charge nurse meetings, facilitated by the nurse manager, provide an established forum for continued development and team building of the charge nurses.

Discussion/Implications for Nursing

At the time of project implementation, healthcare organizations across the nation continued to face significant challenges secondary to the COVID-19 pandemic (Sharma et al., 2021). These challenges, which overwhelmed healthcare systems, included rapid and unprecedented changes in workload and policy development, an ever growing weary and unstable workforce, increased acuity and patient volumes overburdening health care systems, staffing challenges, supply chain shortages, and an extreme market competitiveness for health care clinicians, all of which impacted turnover and team member satisfaction with their role and/or profession (Buerhaus, 2021; Joslin & Joslin, 2020; Raso, Fitzpatrick, & Masick, 2021; Sharma et al., 2021).

Physical and psychological safety, meaning and purpose, choice and autonomy, and camaraderie and teamwork are four of the nine critical elements that are described as fundamental human needs that must be addressed with the implementation of the *IHI Framework* and are central for improving joy in work (Perlo et al., 2017). The COVID -19 pandemic impacted each of these elements to an unprecedented extent, beyond the boundaries of the neuroscience clinical unit, and likely impacted the outcome of this evidence-based project.

Psychological safety, a characteristic of the team, occurs when the overall climate is one in which team members feel free and safe to share their thoughts and feelings without retribution (Perlo et al., 2017). A pandemic creates a high stress and high risk environment in which health

care clinicians can experience a wide range of physical and emotional symptoms including difficulty sleeping, burnout, distress, exhaustion, worry and anxiety, fear, physical pain, anger and irritability, and extreme sadness and depression (Chatmon & Rooney, 2021; Chen et al., 2021; Forrest et al., 2021; Holton et al., 2021). Nationally, nurse leaders struggled with responding to the emotional health and well-being of their team members (Joslin & Joslin, 2020).

Physical safety occurs when team members feel free from physical harm at work including exposure to infection (Perlo et al., 2017). The pandemic impacted resources globally including the availability of personal protective equipment (PPE) as well as access to an effective vaccine. Fear of personal safety due to actual or perceived lack of adequate PPE impacted health care clinicians across the nation while fears around transmission to family members and the community at large contributed to emotional distress and burnout (Sharma et al., 2021). Additionally, psychological and physical safety of health care clinicians is threatened with increased patient and family aggression in the form of physical violence and verbal assaults during emergent situations such as a pandemic regardless of the socio-economic status of the region (Muñoz del Carpio-Toia, Begazo Muñoz del Carpio, Mayta-Tristan, Esperanza Alarcón-Yaquetto, & Málaga, 2021; Devi, S., 2020).

In respects to choice and autonomy, Perlo et al. (2017) indicates the environment supports team members having a choice and a voice in decisions on processes, changes and improvements that impact them. In the face of the pandemic many decisions within the healthcare organization, which were influenced by the Centers for Disease Control (CDC) and the Kent County Health Department, were made rapidly with the best information available at a given moment in time, and not always with input from all key stakeholders. These decisions

included limitations on number of visitors, scheduling and cancelling of surgical procedures, activation of critical staffing, and the implementation of mask and vaccine mandates.

Nationally, in late 2020, just above 60% of adults in the United States (US) intended to receive the vaccine once available. Variables influencing an individual's decision to vaccinate include beliefs surrounding the safety and efficacy of the vaccine, race, age, education level, cultural beliefs, levels of trust in government leaders and agencies, and political affiliations (Salmon, Opel, Dudley, Brewer, & Breiman, 2021). In addition, political influence versus public health became forceful drivers in influencing how individuals responded to mask and vaccine mandates as well as "lock downs" nationally (Navarro & Markel, 2021).

Similar to what was seen across the nation, enactment of mask and vaccine mandates within the healthcare organization resulted in a divide among the workforce as some perceived the mandates as an infringement on civil rights versus protecting the greater good of the community. Personal beliefs also influenced an individual's response to the mandates as belief in a higher power to protect against the virus and the belief in science and medicine came to a head. On October 18th, the health care organization mandated all team members either obtain the full vaccine series or submit, and receive approval, for a religious or medical vaccine exemption. On the neuroscience clinical unit 16 team members (11 RNs, 3 NTs, and 2 unit secretaries) requested, and were granted, an exemption.

Perlo et al. (2021) define camaraderie and teamwork as being reflective of social cohesion and trusting relationships, including trust in the organizational leadership as well as transparent communication. As previously discussed, the public health response to the pandemic became heavily politcized, a divide among civic and social obligation versus an infringement on individual freedoms (Navarro & Markel, 2021).

Lastly, meaning and purpose relates to team members finding a sense of meaning in their work. Does their work make a difference (Perlo et al., 2017)? Despite symptoms of acute stress, anxiety and depression, health care clinicians report an increased sense of meaning and purpose early in the COVID-19 pandemic (Shechter et al., 2020). As health care clinicians continue to face the unrelenting challenges of the pandemic, finding meaning and purpose in their work may become increasingly questioned for some.

Fundamentally, the COVID-19 pandemic impacted the implementation of the *IHI Framework*. The COVID-19 pandemic proved to be a significant disruption impacting overall stress and testing the resilience of healthcare organizations across the nation.

Due to the volatility of the nursing work force and ultimate staffing crisis, various monetary stabilization efforts were activated within the healthcare organization during implementation of the *IHI Framework.* Although an improvement of team member churn, belonging and engagement was not experienced on the neuroscience clinical unit, it is unknown if the change which did occur was less than what would have occurred in the absence of the monetary recruitment and retention efforts. Additionally, with the exception of a wage adjustment, the recruitment and retention efforts, at this point, have been focused on RNs only. An additional consideration is the impact of the "virtual first" policy of the organization, an outcome of the COVID-19 pandemic, on the implementation of the *IHI Framework.* Due to the "virtual first" environment all "What matters to you?" conversations and charge nurse meetings allowed for participation either virtually or in person. This impacted the implementation of the project in two ways. The "What matters to you?" conversations, as outlined in the *IHI Framework,* are intended to be in person with the use of white boards to allow participants the ability to visualize what is being shared. Considering the "virtual first" approach of the

organization, the doctoral student pivoted the facilitation of the conversations to a hybrid model to allow virtual or in person participation. In addition, team building activities with the charge nurses during monthly charge nurse meetings were flexible to allow both in person and virtual participation.

The presence of the many challenges presented by the pandemic likely contributed or influenced the outcome of this evidence-based quality improvement project.

Cost-Benefit Analysis/Budget

Personnel and supply costs contributed to the overall cost of $9,403.23 associated with the implementation of this evidence-based quality improvement project (see Appendix GG for budget). As previously stated, the average cost of turnover for a bedside RN is $40,038 and results in the average hospital losing between $3.6 - $6.5 million annually (NSI, 2021). Each percent change in RN turnover will impact, either positively or negatively, the bottom line by $270,800 annually (NSI, 2021). The benefit of achieving the goal of improving the overall HWE on the neuroscience clinical unit with an ultimate desired state of improving RN churn, RN and NT sense of belonging, and RN and NT engagement clearly outweighs the cost associated with the implementation of the *IHI Framework*.

Conclusion

The purpose of this evidence-based quality improvement project was to improve the HWE on the neuroscience clinical unit by implementing strategies to influence the four critical components of the *IHI Framework* (physical and psychological safety, meaning and purpose, choice and autonomy, and camaraderie and teamwork) ultimately improving turnover, churn, and team member belonging and engagement on a neuroscience clinical unit within a large midwestern Magnet ® designated hospital. Likelihood to recommend was also evaluated as a

counterbalance measure. Effectiveness of the implementation of the *IHI Framework* on the neuroscience clinical unit was evaluated by comparing pre and post implementation data for rolling twelve month transfer and churn percentage, team member engagement and belonging scores, and likelihood to recommend as demonstrated by HCAHPS. Overall, the twelve month rolling transfer and churn percentage for the neuroscience clinical unit decreased from August 2021 to January 2022. The neuroscience clinical unit experienced a decrease in both belonging and engagement scores from July 2021 to November 2021. In respects to likelihood to recommend, the neuroscience clinical unit saw an initial increase from August to September which was followed by a decrease in December 2021. January 2022 demonstrated an increase from December, however, remained below August 2021 "top box."

Unfortunately implementation and evaluation of the *IHI Framework* occurred during the peak of COVID-19 pandemic for this particular healthcare organization and surrounding community. As a result, various factors likely influenced the outcome of this project. Interventions, including recruitment and retention bonuses, were implemented by the healthcare organization in an attempt to stabilize an exceptionally volatile workforce during a time of extreme patient volumes and acuity. In addition, unprecedented vacancy rates across departments in combination with volumes of travel RNs heretofore not experienced by the organization contributed to the significant stress on the healthcare organization. The emotional toll of the COVID-19 pandemic on health care clinicians both personally and professionally cannot be underestimated.

Considering the impact of the COVID-19 pandemic on physical and psychological safety, meaning and purpose, choice and autonomy, and camaraderie and teamwork, which are four of

the nine critical elements of the *IHI Framework*, it is recommended that the neuroscience clinical unit consider holding "What matters to you conversations?" as the healthcare organization begins to stabilize post pandemic. Ongoing monitoring of turnover and churn, as well as team member belonging and engagement will continue to provide visibility to the impact of the *IHI Framework*. Lastly, implementation of the *IHI Framework* may be a strategy to consider as healthcare organizations begin to recover from the COVID-19 pandemic.

In addition to the COVID - 19 pandemic, the presence of travel RNs and unit vacancy rate were variables likely impacting the outcome of this project. Geographical layout, size of clinical unit and patient population served may be additional factors which influence team member turnover, churn, sense of belonging and engagement as well as likelihood to recommend. Recognizing this, acknowledging the size, layout and patient population of the neuroscience clinical unit, a future consideration may be to evaluate these variables and their potential impact on belonging and engagement scores.

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Appendix A

Figure 1. Fishbone Diagram

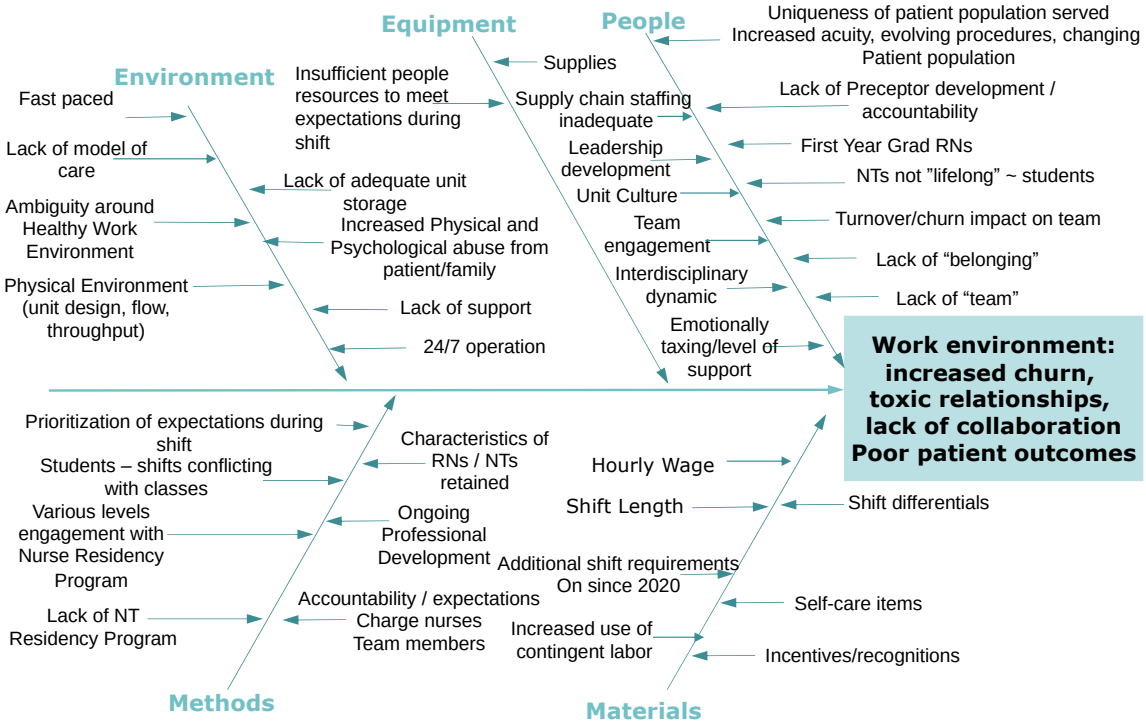

Figure A1. Fishbone diagram depicting factors contributing to the climate of the current work environment were identified and organized into the following categories: environment, equipment, people, methods and materials.

Appendix B

Strengths/Weaknesses/Opportunities/Threats (SWOT)

Strengths

- Clinical Nursing Director and Nurse manager of clinical unit highly engaged
- Nurse manager previously held sessions with charge nurses as well as team members
- Developed "Leadership Commitment Statement" for charge nurses. This statement, which was signed by the charge nurses, clearly articulates the expectations of the role
- Preparing to implement "Staffing Pilot" which will pull charge nurse out of assignment during night shift
- Clinical Nurse Specialist highly engaged
- Nurse Educator highly engaged
- Support from Employee Relations / Human Resources (HR). Prior to the COVID - 19 Pandemic, partnered with HR to create "Culture Timeline/Action Plan." Not implemented due to COVID
- High appreciation for implementation of evidence-based strategies [preceptor program/development]
- Team is "nimble" and accustomed to change (may not support the change, but are accustomed to change)
- Nurse manager describes team as "having so much potential"
- Categories of feedback, empowerment, recognition, engagement, belonging and resources on the March 2021 listening survey, although below company, all improved in comparison to the prior survey

Weaknesses

- Negative culture "nurses eat their young" on unit persistent for years
- Toxic and intimidating environment
- Lack of engagement by clinical staff ~ lack of functioning shared governance council or committees on clinical unit
- Lack of peer-to-peer accountability
- Recognition and engagement initiatives/strategies implemented by leadership seen as attempts to "pacify." Overall "lack of gratitude"
- Low likelihood to recommend scores on unit
- High rate of falls with injury on unit
- Neuro patient population ~ high level of employee assault due to patient population served
- High nursing turnover within first year of employment
- Lack of structure surrounding preceptor development
- Multiple nurse manager leaders over years
- Inconsistent styles of manager leadership over years
- Lack of trust in leadership
- Front line staff contributing to negative culture high tenure on unit
- Historically, previous nurse managers not holding negative staff accountable for behavior
- Team work is "segregated" ~ helping those within their "group"

Opportunities

- Address / implement strategies to address “eat their young” culture on unit.
- Improve patient satisfaction scores on unit
- Improve falls with injury rate on unit
- Increase team member expertise and awareness in the identification and prevention of escalating behaviors in patients
- Engage security services presence
- Enhance Nursing Preceptor Development (Preceptor identification and development, ongoing evaluation)
- Enhance nurse manager support and development
- Increased focus on prioritization of priorities and alignment with strategic plan
- Engaging charge nurse and preceptors
- Enhancement of preceptor curriculum
- Support “healthy” unit turnover
- Improvement in employee engagement scores
- Implement shared governance council on unit
- Intentional partnership with security services and / or de-escalation training
- Decrease physical injury / IDM cases

Threats

- Physical threats and actual attacks to team member safety from patients and visitors
- Competing priorities within organization
- Initial worsening of turnover
- Initial impact on employee engagement scores
- Failure of executive leadership to recognize reasoning behind initial decrease in engagement scores
- Nurse educator time constraints in enhancing preceptor program
- Scheduling of worked shifts for new team members conflicting with nurse residency program cadence
- Number of orientees exceeds number of developed preceptors
- Toxic members of the team
- Vacancy rate
- IDM cases

Appendix C

Key Recommendations Contributing to the Development of a HWE from the Joint Commission, IHI and AACN in Comparison to Strategies Implemented in the Past on Neuroscience Clinical Unit

Recommended strategies	Joint Commission	IHI	AACN	Neuroscience Clinical Unit
General Concepts / Critical Components	• Teamwork • Communication • Collaborative work environment	• Meaning and purpose • Choice and autonomy • Recognition and rewards • Camaraderie and teamwork • Daily improvement • Wellness and Resilience • Real-time measurement • Participative management	• Skilled communication • Effective decision making • Appropriate staffing • True collaboration • Meaningful recognition • Authentic Leadership	• Staffing • Charge RN loyalty and accountability • Addressing professionalism and disrespectful behavior when aware
Behaviors: Senior leaders Managers and core leaders Individuals	Address behaviors, including overt and passive behaviors, that threaten performance of the team Hospital must have a code of conduct defining acceptable and inappropriate behaviors. Leaders must implement a process for managing disruptive and inappropriate behaviors.	Everyone plays a role in nurturing joy in the workplace Address professionalism or disrespectful behavior.		Implementation of charge RN accountability and performance expectations

Ensure basic fundamental pre - conditions are met	Hold team members accountable for inappropriate behaviors	Physical and psychological safety ~ includes offering support for second victims. Meaning and purpose Choice and autonomy Camaraderie and teamwork Fairness and equity	Staffing policies grounded in ethical principles. Nurses participate in all phases of the staffing process.	From an organizational perspective, increased focus on team member safety and well-being. System - early stages of piloting "Peer to Peer" support program (second victim). System - Professional Group / Team Debrief available for team members after traumatic events.
Communication / structure for regular communication	Develop and implement zero tolerance policies. Develop organizational process for addressing intimidating and disruptive behaviors.	What matters to you conversations. Listen and learn. Establish policies and practices to address harm and safety concerns, Develop huddles, workgroups, or team meetings to focus on bright spots or impediments to joy in work. "Pause for joyful moment"	Establish zero tolerance policies to address and eliminate abuse and other disrespectful behavior. Establish formal structures and processes to ensure effective and respectful communication. Include communication as element of performance evaluation.	Monthly charge RN team building (Leadership Assimilation planned July 2021) Weekly "What is Val up to" newsletter Daily Monitoring Daily Improvement (MDI) huddles
Identification of key opportunities	Assess team member perceptions of the seriousness and extent of unprofessional	Identify impediments in daily work ("pebbles in their shoes")		Met 1:1 with each team member (2019) to discuss current culture on unit.

behaviors.			Staffing - actively recruiting team members
Collaborate on setting priorities / Collaboration / Decision making	Set priorities and address together	Interprofessional education and coaching to develop collaboration skills. Ensure decision making authority of nurses is acknowledged and incorporated into the norm.	
Transparency in identified opportunities	"What matters to you" communication board		Planning to conduct leader assimilation exercise in July 2021.
Transparency on small tests of change	Documentation and public display of small tests of change based upon opportunities identified by "what matters to you conversation"		
Meaningful recognition		Comprehensive system in place including formal processes and forums to ensure sustainable focus on recognition of team members. Team members recognize that everyone is responsible for playing an active role in meaningful recognition.	

Education	Educate team members on appropriate and inappropriate professional behavior based upon code of conduct. Skills based training and coaching on relationship building and collaborative practice including: how to provide feedback and conflict resolution.	Provide regular training and competency training to ensure skills and develop trust to achieve desired culture.	Organization provides support for and access to education and coaching to ensure leadership development in authentic leadership, communication, decision making, true collaboration, meaningful recognition, and appropriate staffing.	Annual Code of Excellence competency. Collaborating with Nursing Practice and Development on initial onboarding / orientation curriculum for neurosciences. Pilot revised preceptor curriculum.

Appendix D

Figure 2. IHI Framework for Improving Joy in Work

Figure 2. IHI Framework for Improving Joy in Work, by Perlo, J., Balik, B., Swensen, S., Kabcenell, A., Landsman, J., & Feeley, D. (2017). *IHI framework for improving joy at work.* Institute for Healthcare Improvement.

Appendix E

Figure 3. PRISMA Diagram

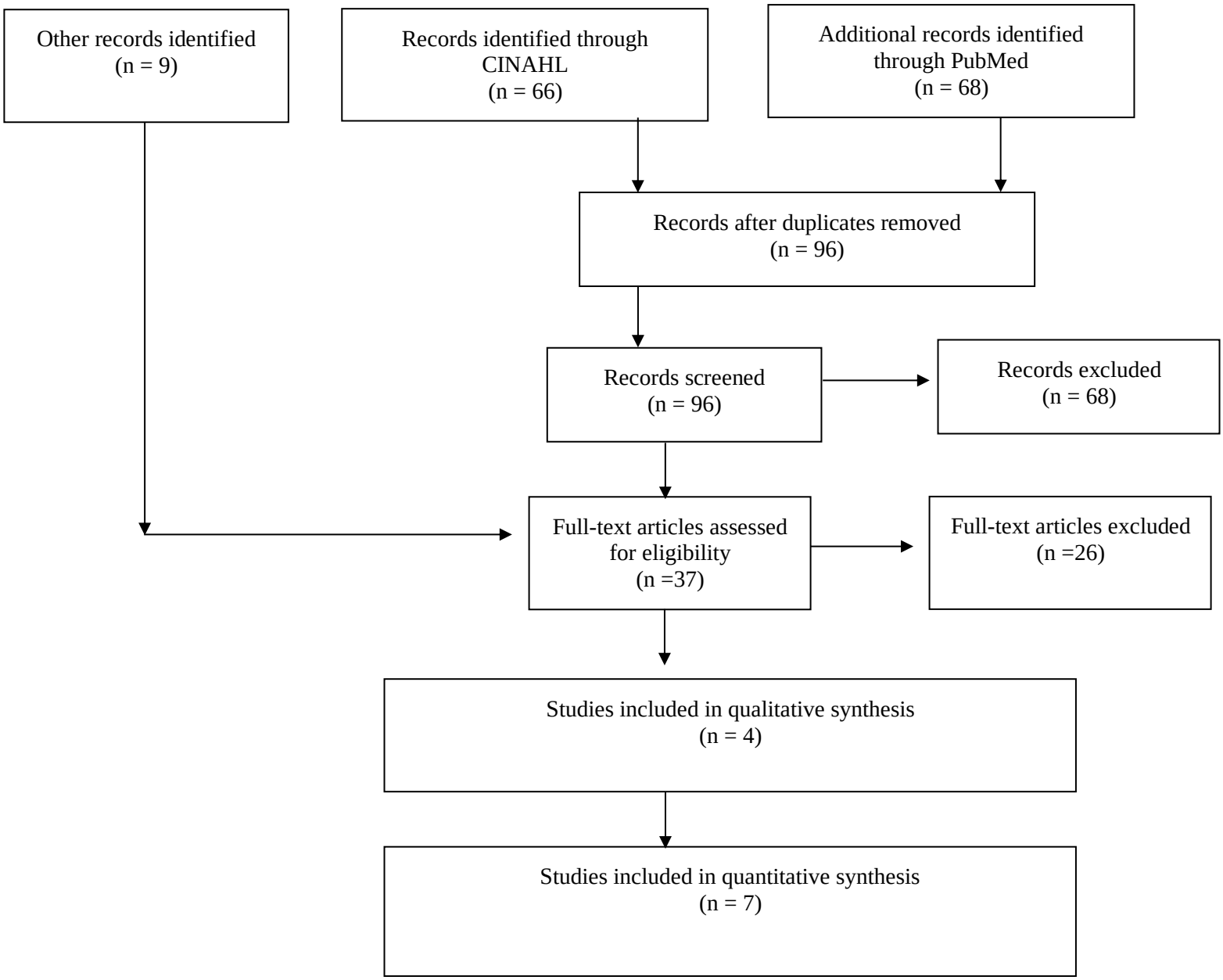

Figure 3. Depiction of key terms and phrases leveraged in searching defined databases and delineation of flow identifying number of publications reviewed and ultimately included in review of literature.

Appendix F

Literature Evaluation Table

1. Nelson-Brantley, H., Park, S. H., & Bergquist-Beringer, S. (2018). Characteristics of the nursing practice environment associated with lower unit - level RN turnover. *Journal of Nursing Administration, 48,* 31-37. doi:10.1097/NNA.0000000000000567							
Purpose of study: Examine which characteristics of NPE were associated with actual RN turnover in acute care hospitals							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
N/A	Secondary analysis of 2011 NDNQI RN turnover and RN survey Cross sectional, correlational design	Convenience Sample 1002 acute care hospital units from 162 hospitals in United States	IV 1 = NPE IV 2 = professional autonomy IV 3 = exemplary professional nursing practice IV 4 = managerial support IV 5 = staffing and resource adequacy IV 6 = effective interprofessional relations IV 7 = age	NPE, Practice Environment Scale of the Nursing Work Index (PES-NWI), Included in NDNQI RN Survey, Cronbach's alpha =.82, for each subscale alpha > .80. Average monthly RN Turnover rate.	Descriptive statistics Multivariate linear regression	Overall NPE and turnover: For each point increase in mean PES-NWI total score: RN turnover rates decreased 14.8% *B*=-0.16; 95% CI, -.23 to -.09; *P* <.01 RN turnover decrease by 1% for every year increase in age, *B* = -.01; 95% CI, -.01 to 0.00; P < .01 and increased 2% for every year increase in mean RN	LOE VI Various variables influence RN turnover including the NPE. Recognizing the influence of autonomy, exemplary professional nursing practice, managerial support, staffing and interpersonal relations can assist nurse leaders in responding to potential or actual RN turnover.

			IV 8 = years' experience IV 9 = education level RN DV = RN Turnover Proportion of permanent, direct care RNs who left their position for any reason			tenure on unit *B* = -.02; 95% CI, -.03 to .02; *P* < .01. For each point increase in staffing and resource PES-NWI subscale, RN turnover decreased by 14.8%, *B* = -.16; 95% CI, -.23 to -.09; *P* < .01. For each point increase in the managerial support PES-NWI subscale, RN turnover increased by 8.3%, *B* = .08; 95% CI, 0.00 to 0.15; *P* < .05. RN participation in hospital affairs (*P* = .21) and collegial RN physician relations (*P* = 0.49) were not significant	

						Hospital ownership, Case Mix Index, unit mean age RN, tenure and education level were all significantly associated with RN turnover	
2. Numminen, O., Ruoppa, E., Leino-Kilpi, H., Isoaho, H., Hupli, M., & Meretoja, R. (2015). Practice environment and its association with professional competence and work-related factors: perception of newly graduated nurses. *Journal of Nursing Management, 24,* E1-E11, doi:10.1111/jonm.12280							
Purpose of study: To examine the perception of new graduate nurses on their practice environment and the association of the practice environment with their self-assessed competence, turnover intent and job satisfaction.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
N/A	Quantitative, descriptive, comparative, cross-sectional design	All NGNs registered by the National Supervisory Authority for Welfare and Health Care within one year in Finland. N = 318	Research questions: 1. What is the newly graduated nurses' perception of their practice environment? 2. Are newly graduated nurses' perceptions of the practice environment associated with their self-	Practice Environment Scale of the Nursing Work Index (PES-NWI) - measures nurses' perception of practice environment Nurse Competence Scale - measures nurses' self-assessed competence	Frequency distributions, percentages, means, ranges and standard deviations to summarize data. MANOVA to estimate associations between practice environment and work related factors	Perceptions of practice environment: most positive perceptions were in collegial nurse-physician relations subscale (Cronbach's alpha 0.862) Most positive perceptions (score $\geq$ 3) were related to	LOE VI The clinical unit in which this project is being implemented has a high percentage of newly graduate nurses. Strong significant associations between practice environment and work related factors. Highlighted the

			assessed professional competence, turnover intentions and job satisfaction?	Turnover intentions - two questions frequency in considering changing of job and changing of profession Job satisfaction - satisfaction with orientation; satisfaction with current job; satisfaction with quality of care	and differences in the perceptions of practice environment between the nurse groups with higher and lower competence levels. Pearson's correlation coefficient estimated associations between nurses perceptions of the practice environment and professional competence.	collaboration, teamwork, relationships between nurses and physicians, working with clinically competent nurses, opportunities for career development and high administrative expectations of nursing care quality. Correlation between nurses' perception of practice environment and professional competence was statistically significant and positive, yet weak ($r = 0.241$, $p < 0.001$) Nurses at a higher	significance of nursing management and leadership in creating a positive environment and impact of collegial relationships.

						competence level had a more positive perception of their practice environment (F = 7.95, *p* = 0.005) Strong association between: PES-NWI overall and Intention to leave job (F-ratio 28.38, *p* < 0.0001; Nurse participation in hospital affairs and intention to leave job (F-ratio 17.33, *p* < .0001), Intention to leave profession (F-ratio 16.79, *p* < .0001), and satisfaction with the quality of care (F-ratio 16.90, *p* < .0001); Nurse manager ability, leadership	

						support of nurses and intention to leave job (F-ratio 17.01, $p <$ .0001); and Staffing and resource adequacy and satisfaction with the quality of care (F-ratio 14.08, $p <$ .0001).	
3. O'Hara, M. A., Burke, D., Ditomassi, M., & Palan Lopez, R. (2019). Assessment of millennial nurses' job satisfaction and professional practice environment. *Journal of Nursing Administration, 49,* doi:10.1097/NNA.0000000000000777							
Purpose of study: Assess the relationship between demographic factors (age, gender, race, ethnicity, work status, and experience) and the professional practice environment, and work satisfaction to increase understanding of millennial nurses (born between 1981 and 1997).							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
Practice Environment Conceptual Framework	Secondary analysis of data previously collected (cross sectional)	Staff responses from the 2017 Staff Perceptions of the Professional Practice Environment collected in a large, Magnet ® recognized academic medical center. N = 825 with 375 (45%)	Demographics: age, gender, race, work status, highest degree in nursing, years of experience in nursing, and years of nursing in current setting. Professional Practice Environment	PPWEI which measures the following subscales: Autonomy and control over practice Communication Cultural Sensitivity Handling disagreement and conflict Nurse - Physician relationships	Descriptive statistics Multivariate regression analysis to identify relationship between demographics and the subscales of the PPWEI to work satisfaction	Supportive leadership accounts for an additional 63% of variance (F=456.11, $p =$ .0001) Work motivation (F=76.06, $p =$ .0000), resources for quality patient care (F = 21.3,	LOE VI Autonomy, teamwork, and work motivation contribute to the work satisfaction of millennial nurses. With supportive leadership being a key driver to their satisfaction.

		being millennial nurses.		Staffing and resources Supportive leadership Teamwork Work motivation Work satisfaction measured using "Overall, how satisfied or dissatisfied are you working in your primary unit/department?"		*p* = . 0001) and teamwork (F = 5.8, *p* = 0.017)	
4. Perlo, J., Balik, B., Swensen, S., Kabcenell, A., Landsman, J., & Feeley, D. (2017). *IHI framework for improving joy in work.* Retrieved from http://www.ihi.org/Topics/Joy-In-Work/Pages/default.aspx							
Purpose of study: Intended to serve as a guide for health care organizations to engage in conversation and dialogue with colleagues to ultimately enable them to better understand the barriers to joy in work, and partner in creating and implementing high leverage strategies to address the identified issues.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
IHI Framework for Improving Joy in Work	N/A	N/A	Definitions within the IHI Framework key to note: Camaraderie and teamwork - Commensality, social cohesion, productive teams, shared understanding,	There is no single validated measure to evaluate joy in work. Recommended: - two or three system level measures such as satisfaction, engagement, burnout, turnover, absenteeism)		IHI created four steps leaders can implement (as well as clearly defined strategies) to improve joy in work: 1. Ask staff "what matters to you"	LOE V Four primary steps for leaders are outlined as they move their teams to finding joy in work. Tools provided to facilitate: - "What matters to you"

			trusting relationships Participative management - co-production of joy; leaders create space to hear, listen, and involve before acting, clear communication and consensus building as a part of decision making Choice and autonomy - Environment supports choice and flexibility in work, hours, and use of electronic health records Meaning and purpose - daily work is connected to what called individuals to practice, line of sight to organization mission and	- Local level measures; "three daily questions" or "pulse survey" (could also be system level) The IHI Framework for Improving Joy in Work outlines key elements in relation to contributors resulting in happy, healthy, productive people: Individuals: - Real time management - Wellness and resilience - Daily improvement Managers and core leaders: - in addition to the above, camaraderie and teamwork - participative management Senior leaders:		2. Identify unique impediments to joy in work in the local context 3. Commit to a systems approach to making joy in work a shared responsibility at all levels of the organization. 4. Use improvement science to test approaches to improving joy in work in your organization.	conversation guide - Change ideas, as well as illustrative examples, for each component of the IHI framework

			goals, constancy of purpose Physical and Psychological safety - equitable environment free from harm. Just culture that is safe and respectful, support for the Second Victim.	- in addition to the above, recognition and rewards - choice and autonomy - meaning and purpose - physical and psychological safety			
5. Registered Nurses' Association of Ontario. (2008). *Healthy work environments best practice guidelines: Workplace health, safety and well-being of the nurse.* Retrieved from https://rnao.ca/bpg/guidelines/workplace-health-safety-and-well-being-nurse							
Purpose of study: To outline specific recommended interventions, based upon current best practice, in promoting the health, safety and well-being of the nurse and engage decision makers.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
Conceptual Model for Healthy Work Environments for Nurses - Components, Factors & Outcomes	Guideline	NA	Recommendations grouped into following themes: 1. Organization practice 2. Research 3. Education 4. System Organizational Culture - shared	Systematic review of literature, by Joanna Briggs Institute, 1994 - 2005 on Workplace health and safety for nurses Additional literature obtained by panel members	Recommendations related to organization practice outlined - including creation of culture, climate and practices that support, promote and maintain staff	Presentation of the Comprehensive Conceptual Model for Healthy Work Environments for Nurses which delineates the work environment as	LOE V Outline of potential strategies to influence a healthy workplace culture

			beliefs, values, assumptions, symbols, ceremonies and rituals that define an organization's culture and norms. A characteristic of the organization, not the individuals within. Organizational Climate - the atmosphere of the work environment. Forms more quickly and alters more rapidly than organizational culture.	as relevant and related to workplace health, safety and well-being of the nurse, current occupational health and safety legistlation	health, well being and safety as well as focus on establishment of organizational practices that foster mutual responsibility and accountability by individual nurses and organizational leaders to ensure a safe work environment.	a product of interdependence among the individual, organizational and external systems. Interventions must target all three levels (micro, meso and macro) in order to impact the nurse, patient, organization, and community.	
6. Reinhardt, A. C., León, T. G., & Amatya, A. (2020). Why nurses stay: Analysis of the registered nurse workforce and the relationship to work environments. *Applied Nursing Research, 55.* doi:10.1016/j.apnr.2020.151316							
Purpose of study: Examine how factors [sense of belonging, work environment characteristics, and workplace violence efforts] impact the duration of employment. Investigate if there is a relationship between demographic variables and length of employment in a nurses first professional experience.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice

Kanter's Structural Empowerment Model	Descriptive correlational survey study	Convenience random sample of 258/700 licensed registered nurses New Mexico	Survey tool correlations: IV 1 = sense of belonging: self-esteem IV 2 = sense of belonging: self-efficacy IV 3 = sense of belonging: connectedness IV 4 = Demographic variables Select composite score factors in the work environment that encourage RN retention: DV 1 = professional autonomy DV 2 = control of practice DV 3 = collegial relationships DV 4 = organizational support	Survey Demographic questionnaire Belongingness Scale-Clinical Placement Experience (BS-CPE), Levett-Jones & Lathlean, Cronbach's alpha 0.92. Nurse Workplace Relational Environment Scale (NWRES), Duddle & Boughton, Cronbach's alpha 0.872, subscales range 0.781 - 0.972. Nurses Work Index - Revised (NWI - R), Aiken & Patrician, Cronbach's alpha 0.96, subscale alphas 0.84 - 0.91.	Pearsons Product - momentum correlation coefficients Fisher's z - transformation Cronbach's alpha Kaplan Meier method Log rank tests	BS-CPE negative correlation with all NWI - R subscales and NWRES workplace conflict (r = -0.214) BS-CPE subscales positively correlated with work environment (r=0.527) and job satisfaction subscales of NWRES (r=0.417) NWRES subscales and NWI - R subscales negatively correlated for work environment and job satisfaction and had a positive correlation for workplace conflict.	LOE VI Limitations to consider include: BS-CPE was developed to evaluate belonging in nursing students during clinical experiences. Further evaluation of the tool with professional nurses may be of additional value. An additional limitation, as highlighted by the authors, is the evaluation of benefits and pay together versus separately as influencers of job satisfaction. Recommended for consideration as operational leaders develop strategies targeted toward

			DV 5 = work environment DV 6 = workplace conflict DV 7 = job satisfaction DV 8 = length of employment first professional profession			Strong negative correlation NWI-R autonomy (r=-.204), collegial relationships (r=-.218) and NWRES job satisfaction Strong correlation between NWRES work environment and NWI-R collegial relationships (r=-.209). BS-CPE positive correlation to NWRES work environment (r=.527), job satisfaction (r=0.417); negative to conflict (r= -.214). Cronbach alpha subdomains BSE-CPE and NWI-R $\geq$ 0.8 Cronbach alpha for NWRES work	the retention of RNs in the healthcare setting. This research article identifies a positive correlation between elements of belonging, particularly esteem, efficacy, and connectedness could an improved work environment as well as improved job satisfaction.

						environment 0.9, work conflict 0.68, job satisfaction 0.67 Length of stay first job ADN (70.9 months)> doctoral degrees (15.6 months) Significant diff btw white, more likely to stay, and other races based on likelihood to stay first position Analysis between BS-CPE and NWRES, indicates relationship btw sense of belonging and connection with the workplace environment (r=.527) Average work environment score highest for nurses with	

						doctoral degrees (53.6). However, workplace conflict score highest for nurses with doctorate (16.0) or professional degree (15.2). Workplace conflict highest for nurses with Asian ethnicity (16.2). BS-CPE higher among Asian nurses (128.0) and lowest among native American nurses (119.1). BS-CPE highest for nurses with diploma (130.3) and lowest among MSN (123.6). Length of stay first profession, longest for native American (100.5) and	

						shortest for Asian nurses (42.0). Length of stay in first job longest for nurses with ADN (70.9) and shortest for nurses with doctoral degrees (15.6).	
7. Shirey, M. R. (2017). Leadership practices for healthy work environments. Nursing Management, 48, 42-50. doi:10.1097/01.NUMA.0000515796.79720.e6							
Purpose of study: Literature search to identify the top 10 research articles describing leadership practices of nursing leaders which are required for creating and sustaining healthy work environments in the healthcare setting.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
N/A	Literature review and synthesis of 10 articles of which four were descriptive, one was a Delphi study, one was a secondary data analysis of a qualitative study, one was a meta-analysis, and three were reviews of the literature	N/A	Four themes were identified as critical evidence-based leadership practices in the creation and sustainment of HWE's in healthcare: quality leadership, relational exchanges, environmental elements, and	Theme 1: Quality Leadership includes: leadership attributes and style, emotional intelligence, leadership competence, and vision advocacy and messaging. A relational style was preferred over a task oriented style.	N/A	Leadership style, relational engagement, cultivation of supporting structure and recognizing the impact of contextual factors contribute to the development and sustainment of a HWE.	LOE V Contributes to the body of knowledge in identifying specific leadership practices to contribute to the creation and sustainment of a HWE.

			contextual factors. Contextual factors include organizational climate and culture.	Theme 2: Relational exchanges: the relationships between managers and workers, good communication and collaboration, impacts unit engagement and job satisfaction as well as improved patient outcomes Theme 3: Environmental elements: certain elements such as supportive structures, access to resources, ongoing developmental opportunities must be evident to ensure a HWE. Poor communication, lack of shared decision making, and low levels of meaningful recognition contribute to the decline of a HWE.			

				Theme 4: Contextual factors: Includes organizational culture and climate. Organizational culture is a broad (macro) concept whereas organizational climate is focused at a micro level.			
8. Ulrich, B., Barden, C., Cassidy, L., & Varn-Davis, N. (2019). Critical care nurse work environments 2018: Findings and implications. *Critical Care Nurse, 39,* 67-84. doi:10.4037/ccn2019605							
Purpose of study: To evaluate the current state of critical care nurse work environments.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
N/A	Cross sectional Mixed methods	Convenience sample of all RNs (N=8080) in the AACN database at time of study	Evaluation of the health of the work environment in the participants work units and organizations: Overall perception of work environment Skilled communication	Critical Elements of a Healthy Work Environment Scale (a part of the AACN Critical Care Nurse Work Environment Survey)	Descriptive statistic Spearman rank correlation to measure degree of association between ordinal level variables	Perception of work environment: Five lowest ranked unit elements: 1. nurse leaders 2. RNs engaged in technologies to increase effectiveness of care delivery	LOE VI HWE consistently ranked higher in clinical unit in comparison to the organization. Significant difference in results from nurses working in units with HWE

			and true collaboration Effective decision making Appropriate staffing Meaningful recognition Authentic leadership			3. RN staffing ensures match between patient needs and RN competencies 4. Structured process to resolve disputes 5. Formal processes to evaluate the effect of staffing decisions on patient and system outcomes Communica-tion and collaboration moderately positively associated with job satisfaction (r=0.37, r=0.35 respectively), quality of care (r = 0.37, r = 0.37), frontline nurse manager overall effectiveness (r = 0.38, r = 0.37), and intent to not	standards implemented. Nurse managers profoundly impact the work environment.

						leave current position (r = -0.15, r = -0.15). Respect from other RNs rated the highest in comparison to respect from other health care colleagues, physicians, front line nurse managers, and administration. Job satisfaction positively associated respect from FLNMs (r = .50), communication (r = 0.37), and intent to not leave one's current position (r = - .43). Recognition most meaningful when from patients or families or other RNs.	

						Authentic leadership - perceived overall effectiveness of FLNM was moderately related to the health of the environment (r = 0.50), nurses job satisfaction (r = 0.55), and intent to leave (r = -0.26).	
9. Van Bogaert, P., Van heusden, D., Slootmans, S., Roosen, I., Van Aken, P., Hans, G. H., & Franck, E. (2018). Staff empowerment and engagement in a Magnet® recognized and Joint Commission international accredited academic centre in Belgium: a cross-sectional survey. *BMC Health Services Research, 18,* 756. doi:10-.1186/s12913-018-3562-3							
Purpose of study: This study described a component of a research program that focused on organizational features of nurses' workplaces in relation to nurse and patient outcomes. This study's aim is to investigate associations between work characteristics and job satisfaction, turn over intentions and perceived quality of care as dependent variables.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
Kanter's Model of Structural Empowerment	Cross sectional	600 bed academic acute care center in Belgium Convenience sample N = 1236 *(Nursing staff N =864 (65%)*	IV 1 = work characteristic social capital IV 2 = work characteristic decision latitude IV 3 = work characteristic workload	Work characteristics - 3 scales Work engagement - shortened Utrecht Work Engagement scale (Vigor, Dedication, absorption)	Hierarchical regression analysis	Intention to leave profession Generation Y, OR = 13.60 (*P* < .001); Generation X, OR = 5.86 (*P* < .01) Social capital (OR = 2.51, *P*	LOE VI There are a fair amount of limitations with this study. The validity and reliability of the tools used were not consistently defined. Quality of care was a

		Healthcare staff N = 131 Medical staff N = 24)	IV 4 = work engagement IV 5 = burnout DV 1 = job satisfaction DV 2 = intention to leave hospital DV 3 = intention to leave profession DV 4 = perceived quality of care	Burnout - Maslach Burnout Inventory (Emotional exhaustion, Depersonalization , Personal accomplishment) Perceived quality of care in the unit and in the hospital [4 point Likert scale] Job outcomes Aiken et al (2001) Cronbach's alpha majority scales = 0.71 - 0.92, decision latitude = 0.63, depersonalization = 0.66 in nursing staff		< .001) and decision latitude (OR = 6.15, *P* = < .001) were positively while workload was negatively (OR = .34, *P* < .001) associated with staff very satisfied in job satisfaction Quality of care at unit assessed at excellent was positive associated with social capital (OR = 4.63, *P* < .001) and decision latitude (OR = 1.97, *P* < .001) Intention to leave hospital (OR = .52, *P* < .001) and profession (OR = .54, *P* < .001) negatively associated with dedication	subjective measurement versus actual benchmarking data such as NDNQI. The variables of intention to leave the organization and intention to leave the profession are not representative of actual turnover, rather a measurement of intent. Lastly, the results were reflective of all study participants without differentiation between professions. Despite the limitations, including this study does add to the overall body of knowledge and is consistent with results of other comparative research. Recognizing the impact of social

						Emotional exhaustion was positive associated with intention to leave the hospital (OR = 1.72, *P* < .001) and intention to leave the profession (OR = 1.95, *P* < .001)	capital, decision latitude, and workload on the perceived impact on job outcomes and quality of care is an important consideration for nurse leaders in striving for decreased turnover and improved quality of care.
10. Van Osch, M., Scarborough, K., Crowe, S., Wolff, A.C., & Reimer-Kirkham, S. (2017). Understanding the factors which promote registered nurses' intent to stay in emergency and critical care areas. *Journal of Clinical Nursing,* 27, 1209-1215. doi:10.1111/jocn.14167							
Purpose of study: Explore influential factors and strategies that promote an experienced nurse's intent to stay in their emergency or critical care area.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice
Focus groups	Qualitative interpretive descriptive design - Focus group	Nurses with two or more years of experience within the same ED or ICU N = 13	Sample questions: What factors promote you to continue working in the same department? Were there any unit/employer strategies that influenced you to stay in your department?	Interpretive descriptive design.	Transcripts from focus groups were read, reviewed and coded by the research team. Patterns and emerging categories were identified. From the categories, broader themes were developed.	Four major themes identified which influence a nurses intent to stay: 1. leadership (managers, clinical nurse educators, charge nurses) 2. interpersonal relationships	Level VI Identification of specific strategies which influence the intent to stay by ED and ICU nurses including: Manager who were fully engaged, open to giving and receiving feedback, setting clear expectations,

						3. Practice environment 4. Personal lifestyle / job fit In addition, being valued, respected and acknowledged	conveying sense of value, respect and acknowledgment. Interprofessional relationships including importance of social connections with nursing peers. Practice environment included aspects of mentorship and teamwork, autonomy in practice, trust in peers. In respects to personal lifestyle/job fit, proximity to home, work life balance and flexible work schedule were identified as factors.
11. Wei, H., Sewell, K. A., Woody, G., & Rose, M. (2018). The state of the science of nurse work environments in the United States: A systematic review. *International Journal of Nursing Sciences, 5,* 287-300. doi:10.10.1016/j.ijnss.2018.04.010							
Purpose of study: To identify, evaluate, and summarize the major foci of studies about nurse work environment in the United States published between 2005 - 2017 as well as to provide insight into strategies targeted at improving the work environment of the nurse.							
Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	LOE/ Implications for Practice

Miles, Huberman and Saldana's constant comparative method	Systematic Review	54 studies included and reviewed	Top three instruments used to evaluate nurse environments: - Practice Environment of the Nursing Work Index Revised - Essentials of Magnetism II - AACN Healthy Work Environment Assessment Tool	Five major themes identified: 1. The impacts of HWE on nurses' outcomes such as psychological health, emotional strains, job satisfaction, and job retention 2. The associations between HWE and nurse workplace interpersonal relationships, job performance, and productivity 3. The effects of HWE on patient care quality 4. The influences of HEW on hospital accidental safety 5. The relationships between nurse leadership and work environments.		Impact of HWE on nurses' outcomes: - HWE were positively associated with nurses' psychological health and negatively correlated with nurses' emotional strains. - when nurses perceived higher caring behaviors within the workplace, they had significantly lower scores on compassion fatigue, stress, and burnout and higher scores on work relationships, job satisfaction, and compassion satisfaction. Impact of HWE on job	LOE V Strategies to promote the work environment focus on the perspective of the nurse, the nurse leader and the organization overall. Additionally, the AACN six standards to promote a HWE were reiterated: 1. skilled communication 2. true collaboration 3. effective decision making 4. appropriate staffing 5. meaningful recognition 6. authentic leadership

						satisfaction and retention: - HWEs were significantly positively correlated with job satisfaction and retention - HWEs had a positive relationship with nurses' perceptions of autonomy, control over practice, nurse-physician relationships, and organizational support Impact of HWE on nurse workplace interpersonal relationships, job performance, and productivity - Nurse workplace relationships were a significant factor affecting nurses'	

						psychological health, job performance and productivity. - Workplace relationships were vital in establishing and maintaining a HWE. Impact of HWE on job performance and productivity - To promote nurses performance and productivity, both intrinsic and extrinsic factors are to be addressed, including the creation of a culture of caring. Impact of HWE on patient care quality	

						- Patient care quality was significantly associated with nursing work environments - patient risk of death and failure to rescue were significantly lower in HWE. Impact of HWE on hospital safety - HWE were inversely correlated with nurses' occupational injuries Relationship between HWE and nurse leadership - Nurse leadership is a significant component of health work environments	

Appendix G

Synthesis Table Themes and Outcomes

Studies	Design	Sample Size	Nursing Practice Environment	Autonomy	Managerial Support	Staffing/ Resource Adequacy of	Effective Inter-personal Relations	RN Turnover	Quality
Nelson - Brantley, et al., 2018, Characteristics of the nursing practice environment associated with lower unit level turnover.	Cross sectional, correlational	N = 162 hospitals N = 1002 hospital units		Nurse participation in hospital affairs did not show a significant association to RN turnover (*P* = .21)	For each point increase in the managerial support PES-NWI subscale, RN turnover increased by 8.3%, *B* = .08; 95% CI, 0.00 to 0.15; *P* < .05.	For each point increase in staffing and resource PES-NWI subscale, RN turnover decreased by 14.8%, *B* = -.16; 95% CI, -.23 to -.09; *P* < .01.	Participation in hospital affairs and collegial RN - Provider relations were not significant in impacting RN turnover	For each point increase in mean PES-NWI total score: RN turnover rates decreased 14.8% *B*=-0.16; 95% CI, -.23 to -.09; *P* <.01	Measured using the PES-NWI sub-scale "nursing foundations for quality of care." Ultimately excluded from research as highly correlated to nurse participation in hospital affairs (r = 0.86).
Numminen et al., 2015, Practice environment and its association with professional competence and work-related factors:	Cross sectional	N = 318	Strong association between: PES-NWI overall and Intention to leave job (F-ratio 28.38, *p* < 0.0001;		Nurse manager ability, leadership support of nurses and intention to leave job (F-ratio 17.01, *p* < .0001);	Staffing and resource adequacy and satisfaction with the quality of care (F-ratio 14.08, *p* < .0001).	Perceptions of practice environment: most positive perceptions were in collegial nurse-physician relations subscale		Nurse participation in hospital affairs and intention to leave job (F-ratio 17.33, *p* < .0001), Intention to leave profession (F-ratio 16.79, *p* < .0001), and satisfaction with the quality of care (F-ratio 16.90, *p* < .0001);

perception of newly graduated nurses			Nurse participation in hospital affairs and intention to leave job (F-ratio 17.33, $p < .0001$), Intention to leave profession (F-ratio 16.79, $p < .0001$), and satisfaction with the quality of care (F-ratio 16.90, $p < .0001$);				(Cronbach's alpha 0.862)		
O'Hara et al., 2019, Assessment of millennial nurses' job satisfaction and professional practice environment	Descriptive Study	N = 825, 375 (45%) were millennial		Autonomy contributes to millennial nurse work satisfaction	Supportive leadership key driver to millennial nurse work satisfaction		Teamwork contributes to millennial nurse work satisfaction		
Perlo, J., et al., 2017, IHI Framework for improving joy in work.	White paper	N/A	Joy is more than the absence of burnout. It is about	Choice and autonomy is an element of the IHI Framework	Creating joy and engagement is a key role		Camaraderie and teamwork identified as element of		Lower levels of staff engagement linked with lower quality patient care, including safety, and

			connections to meaning and purpose. Engagement is often used as an imprecise measure for joy.	for improving joy in work	of effective leaders. Participative management key element of IHI framework.		IHI framework		burnout limits providers empathy.
Reinhardt, A., et al., 2020, Why nurses stay: Analysis of the registered nurse workforce and the relationship to work environments.	Descriptive correlational	N = 258	BS-CPE Belongingness subscales positively correlated with work environment (r=0.527) and job satisfaction subscales of NWRES (r=0.417) Analysis between BS-CPE and NWRES, indicates relationship btw sense of belonging and connection with the workplace	Subset of NWI - R, autonomy Strong negative correlation NWI-R autonomy (r = -.204) NWRES job satisfaction	Subset of NWI - R (organizational support) Strong positive correlation between NWI-R organization and NWI - R autonomy (r = 0.795, *P* < .01) Strong negative correlation between NWI-R organization and NWRES job satisfaction (r = - .149, *P* < .05)		Subset of BS-CPE connected-ness Subset of NWRES belonging, support, collegial relationships, commun-ication, conflict Strong negative correlation NWI-R collegial relationships (r=-.218) and NWRES job satisfaction	Length of employ-ment first profess-ional position Length of stay first profession, longest for native American (100.5 m.) and shortest for Asian nurses (42.0 m.). Length of stay in first job longest for nurses with ADN (70.9 m.)	

			environment (r=.527)		Subset of NWRES (workplace conflict) Statistically significant negative correlation between NWRES workplace conflict and all subscales of the BS-CPE		Strong correlation between NWRES work environment and NWI-R collegial relationships (r= -.209). Connected-ness and belonging Support relationships	and shortest for nurses with doctoral degrees (15.6 m.).	
Registered Nurses Association of Ontario, 2008, Healthy work environments best practice guidelines: Workplace health, safety and well-being of the nurse	Guideline		Organizational climate versus organizational culture	Individual nurses accepting accountability for own work life balance			Incorporation of values such as respect, honesty, feedback, trust and cooperation		
Shirey, M, 2017, Leadership practices for	Literature synthesis	10 articles reviewed	Evidence - based leadership practices to create and		Quality Leadership was identified as one of four	Environmental elements	Relational exchanges		

healthy work environments.			sustain HWEs: quality leadership, relational exchanges, environmental elements, and contextual factors		themes in creating and sustaining HWE				
Ulrich et al., 2019, Critical care nurse work environments 2018: Findings and implications	Cross sectional	N = 8080	Highest rated work unit elements: RNs are as proficient in communication skills as in clinical skills, RNs recognize others for the value they bring to the work of the organization, Structured processes are in place to engage patients and families in decision making, RNs pursue and foster true collaboration,		Perceived overall effectiveness of frontline nurse manager was related to health of the environment, nurses' job satisfaction, and intent to leave.	Appropriate staffing significantly related to all work environment components, including job satisfaction, intent to not leave, respect for RNs by front line manager, organization valuing health and safety, perceived overall effectiveness of frontline	Communication and collaboration positively associated with job satisfaction, quality of care, frontline nurse manager effectiveness and intent to not leave current position. Respect positively associated with job satisfaction, communication, and intent	Better staffing, higher salary/improved benefits, better leadership, more respect from administration and frontline management, and more meaningful recognition were variables identified as influencing those who	

			RNs influence decisions that affect the quality of patient care			nurse manager, valuing RNs as partners and RNs influencing decisions that impact quality of patient care.	to not leave one's current position.	intended to leave to potentially stay.	
Van Bogaert et al., 2018, Staff empowerment and engagement in a Magnet® recognized and Joint Commission international accredited academic centre in Belgium: a cross-sectional survey.	Cross sectional	N = 1236 *(Nursing staff N =864 (65%)* *Healthcare staff N = 131 Medical staff N = 24)*		Decision latitude (OR = 6.15, *P* = < .001) was positively associated with staff very satisfied in job satisfaction		Workload was negatively (OR = .34, *P* < .001) associated with staff very satisfied in job satisfaction	Social capital (shared values and perceived mutual trust) (OR = 2.51, *P* < .001) was positively associated with staff very satisfied in job satisfaction	Intention to leave hospital (OR = .52, *P* < .001) and profession (OR = .54, *P* < .001) negatively associated with dedication Emotional exhaustion was positive associated with intention to leave the hospital (OR =	Quality of care at unit assessed at excellent was positive associated with social capital (OR = 4.63, *P* < .001) and decision latitude (OR = 1.97, *P* < .001)

								1.72, *P* < .001) and intention to leave the profession (OR = 1.95, *P* < .001)	
Van Osch, M et al., 2018. Understanding the factors which promote registered nurses' intent to stay in emergency and critical care areas.	Interpretive descriptive design Focus Groups	N = 13	Overall nature of practice environment contributes to intent to stay.		Fully engaged managers, open to giving and receiving feedback, set clear expectations, focus on improvement and resolve issues.		Social connections with peers. Relationships with providers.		
Wei, H., et al., 2018, The state of the science of nurse work environments in the United States: A systematic review	Systematic review	54 articles		HWEs had a positive relationship with nurses' perceptions of autonomy, control over practice, nurse-physician relationships,	Nurse leadership is a significant component of health work environments		Workplace relationships were vital in establishing and maintaining a HWE.	HWEs were significantly positively correlated with job satisfaction and retention	Patient care quality was significantly associated with nursing work environments - patient risk of death and failure to rescue were significantly lower in HWE.

				and organizational support					

Appendix H

Top ICD 10 Admission Codes Served by the Neuroscience Clinical Unit During 2019 Through March 2021

Diagnosis	Total
Epilepsy and seizure disorders	761
Brain, CNS cancer	530
Ischemic stroke	525
Degenerative spine and disc injury	496
Septicemia	377
Dementia and cognitive disorders	292
Hemorrhagic stroke	279
Neurologic disease	240
Skull fracture and major brain injury	225
Neuromuscular disease	153

Note. 7,488 admissions 2019 through March 2021

Appendix I

Primary Roles, Headcount and FTE Allocation

Job Level	Headcount	FTE
Clerical & Admin - Other	3	1.9
LPN & Med Support - Other	25	14.6
Registered Nurse	35	30.21
Supervisor	1	1.0
Total	64	47.71

Appendix J

Employee Engagement Scores March 2021 Listening Survey Aligned with HWE Concepts

Category	Question	Score (in relation to previous survey)	Company
Feedback	My leader provides me with feedback that helps me improve my performance	64 (+ 10)	77
Empowerment	I feel empowered to make decisions regarding my work	60 (+8)	72
Recognition	I feel satisfied with the recognition or praise I receive for my work.	58 (+11)	69
Engagement	How happy are you working at XX.	56 (+2)	74
Belonging	I feel a sense of belonging at XX.	55 (+ 5)	69
Resources	I have the resources I need to do my job well.	48 (+ 2)	72

Appendix K

MSU IRB

MICHIGAN STATE
UNIVERSITY

DETERMINED NOT "RESEARCH"
Revised Common Rule

September 9, 2021

To: Sue Woltschlaeger-Brooks

Re: **MSU Study ID:** STUDY00006551
Principal Investigator: Sue Woltschlaeger-Brooks
Determination Date: 9/9/2021

Title: DNP Project: Healthy Work Environment and Unit Culture Project Plan

The activity described in this submission was determined not to be "research" as defined by the Common Rule as codified in the U.S. Department of Health and Human Services (DHHS) regulations for the protection of human research subjects.

Definition of Research
For DHHS, "*Research* means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. Activities that meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program that is considered research for other purposes. For example, some demonstration and service programs may include research activities. For purposes of this part, the following activities are deemed not to be research:

(1) Scholarly and journalistic activities (e.g., oral history, journalism, biography, literary criticism, legal research, and historical scholarship), including the collection and use of information, that focus directly on the specific individuals about whom the information is collected.

(2) Public health surveillance activities, including the collection and testing of information or biospecimens, conducted, supported, requested, ordered, required, or authorized by a public health authority. Such activities are limited to those necessary to allow a public health authority to identify, monitor, assess, or investigate potential public health signals, onsets of disease outbreaks, or conditions of public health importance (including trends, signals, risk factors, patterns in diseases, or increases in injuries from using consumer products). Such activities include those associated with providing timely situational awareness and priority setting during the course of an event or crisis that threatens public health (including natural or man-made disasters).

(3) Collection and analysis of information, biospecimens, or records by or for a criminal justice agency for activities authorized by law or court order solely for criminal justice or criminal investigative purposes.

Office of Regulatory Affairs
Human Research Protection Program

4000 Collins Road
Suite 136
Lansing, MI 48910

517-355-2180
Fax: 517-432-4503
Email: irb@msu.edu
www.hrpp.msu.edu

Appendix L

Spectrum Health IRB

SPECTRUM HEALTH
Human Research Protection Program
Office of the Institutional Review Board
100 Michigan NE, MC 038
Grand Rapids, MI 49503
616.486.2031
irbassist@spectrumhealth.org
www.spectrumhealth.org

NON-HUMAN RESEARCH DETERMINATION

September 22, 2021

Susanne A Woltschlaeger-Brooks, MSN

IRB#: **2021-405**

PROTOCOL TITLE: **DNP Project: Healthy Work Environment and Unit Culture Project Plan**

On September 21, 2021, the above referenced project was reviewed and determined that the proposed activity does not meet the definition of human subjects research as defined by DHHS or FDA regulations.

Therefore, it does not require review by the Spectrum Health IRB. This determination applies only to the activities described in the submission referenced above. If changes to this project occur that require review of this determination, submit a new request for determination to the IRB for a review.

It is your responsibility to ensure all necessary institutional permissions are obtained prior to beginning this project. This includes, but is not limited to, ensuring all contracts have been executed, any necessary Data Use Agreements and Material Transfer Agreements have been signed, documentation of support from the Department Chief has been obtained, and any other outstanding items are completed (i.e. CMS device coverage approval letters, material shipment arrangements, etc.).

For questions, contact the Spectrum Health IRB office at 616-486-2031 or by email at irbassist@spectrumhealth.org.

Institutional Review Board
Spectrum Health

cc: Quality Specialist

Appendix M

Facility Level of Support

Spectrum Health

July 29, 2021

To the Michigan State University College of Nursing:

I am familiar with the evidence-based quality improvement project being conducted by Susanne Woltschlaeger Brooks entitled "A Project Plan: Healthy Work Environment and Unit Culture." I understand that involvement of team members and operational leadership from Spectrum Health and the clinical unit 4 South will include the mentorship of the above-named student and will require the application of the proposed process including: reviewing our current processes and/or practice, participation in improvement team meetings, educating team members, and access to benchmark and performance data.

I have read the project's proposal and am comfortable with the project as describe being conducted at our institution over the course of 3 semesters, completing in Spring 2022. I understand that this project will be carried out following sound, ethical principles. Spectrum Health gives permission for the students to disseminate project data and outcomes at Michigan State University College of Nursing for the purpose of academic course completion. Therefore, as a representative of Spectrum Health, I agree that Susanne Woltschlaeger Brooks' evidence-based quality improvement project may be conducted at our institution.

Sincerely,

Joshua Meringa MPA, MHA, MBA, BSN, RN, NPD-BC
Nurse Educator and Academic Liaison
Nursing Practice and Development

Appendix N

Gantt Chart

		NUR 995	NUR 996														NUR 997		
		Accomplished prior to week 1 (NUR 995)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 1		Week 17
	Week of		9/1/2021 and 9/5/2021	9/12/21	9/19/21	9/26/21	10/3/21	10/10/21	10/17/21	10/24/21	10/31/21	11/7/21	11/14/21	11/21/21	11/28/21	12/5/21	12/12/21	1/9/22	→	5/1/22
IHI Framework	Task/Strategy																			
	Completion of tasks as outlined below are leveraged as indicators within the PDSA process Some of the steps may occur in tandem with one another																			
Foundational																				
	Develop project plan																			
	Provide overview of project plan to stakeholders / solicit and incorporate feedback																			
	Secure support from Chief Nurse Officer and Clinical Nursing Director to proceed with project plan																			
	Partner with Senior Nurse Researcher to identify approval bodies required such as Research and Inquiry Council and / or Institutional Review Board																			
	Obtain support / approval from identified MSU approval bodies																			
	Obtain support / approval from identified clinical site approval bodies (IRB approval not required once MSU IRB approves project)																			
	Review of IHI Framwork for Improving Joy in Work with operational leadership																			
	Determine additional audiences for review of framework																			
	Review of IHI Framwork for Improving Joy in Work with additional audiences as determined by Senior Nurse Researcher																			
Step 1: What matters to you?																				
Meaning and purpose	Prepare for "What matters to you?" conversations. In collaboration with nurse manager: * What matters to you in daily work? * What helps make a good day? When we are at our best, what does that look like? * What gets in the way of a good day?																			
Meaning and purpose Physical and psychological safety	Identify already scheduled team meetings (or schedule if none scheduled) for "What matters to you?" conversations.																			
	Implement "What matters to you?" conversations with charge nurses and nursing supervisor. ** Student to facilitate / co - lead with clinical nurse manager ~ see page 24 of framework "Welcome and Invite"																			
	Implement "What matters to you?" conversations with all team members. ** Student to facilitate / co - lead with clinical nurse manager ~ see page 24 of framework "Welcome and Invite"																			

		Accomplished prior to week 1 (NUR 995)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 1		Week 17
	Week of		9/1/2021 and 9/5/2021	9/12/21	9/19/21	9/26/21	10/3/21	10/10/21	10/17/21	10/24/21	10/31/21	11/7/21	11/14/21	11/21/21	11/28/21	12/5/21	12/12/21	1/9/22	→	5/1/22
Step 2: Identify unique impediments to joy in work in the local context																				
	Identify / schedule charge nurse meetings through end of calendar year 2021~ may need to increase frequency in response to identified themes																			
Camaraderie and teamwork	Charge Nurse team building activity ~ identify / develop charge nurse team building activity to start each charge nurse meeting																			
	Implement charge nurse team building activities to kick - off charge nurse meetings moving							→	→	→	→	→	→	→	→	→	→			
Occurs in tandem with step 1	Identify impediments that exist in daily work ("pebbles in their shoes")																			
Choice and autonomy Camaraderie and teamwork	Engage charge nurses to set priorities based upon outcome of "What matters to you" conversations and address them together. * identify which impediments to address																			
Choice and autonomy Camaraderie and teamwork	During daily huddles engage charge nurses in soliciting input / feedback from all team members in solidifying prioritized											→	→	→	→	→	→			
Physical and psychological safety	*Create* communication board or other mechanism to make visible identified impediments.											→	→	→	→	→	→			
	Implement communication board or other mechanisim to make visible identified impediments.												→	→	→	→	→			
Physical and psychological safety	Create daily visual management strategy (identify in collaboration with charge nurses) ~ daily marbles or use of white board)												→	→	→	→	→			
	Implement daily visual management strategy												→	→	→	→	→			
Commit to a systems approach to making joy in work a shared responsibility at all levels of the organization																				
Choice and autonomy Physical and psychological safety	Determine structure for brief / daily updates to the team Daily huddles, communication board, charge nurse meetings intended to solicit input /feedback from team members.												→	→	→	→	→			
Meaning and purpose	During daily huddles engage charge nurses in soliciting input / feedback from all team members in solidifying prioritized impediments. Implementation of "joyful moment" during huddle?												→	→	→	→	→			
Use improvement science to test approaches to improving joy in work in your organization																				
	Leverage PDSA framework in evaluation of completion of identified tasks / strategies																			
	Daily visual management to be determined based upon charge nurse engagement in identifying ideal methodology. Examples include daily measurement glass jar: blue marble - good day individual made progress; tan marble - day without progress; or on white board "joy in work" swim lane with smiling face column and sad face column.																			
	Leverage identified outcome and counterbalance measures to evaluate effectiveness of interventions																			
Data analysis																		→	→	→

Appendix O

"What matters to you?" script

1. Sue Introduce self

MSU graduate nursing student spending time with Val on 4 S through the end of the year … I'm looking at what impacts a healthy work environment and specifically, what brings people (you) joy in your work / what are the bright spots in your day, and what are the "pebbles in your shoes?" that take away from Joy in your work.
You may be wondering "why joy?"….. Well, Joy is one of healthcare's greatest assets…focusing on an asset helps us in designing innovative solutions to what may be impeding our joy at work. Joy is more than the absence of burnout…. It is important to have joy in your work, the intent is to create an environment together that will contribute to bringing joy to work to 4 South.
With that, the overall purpose here today is to have meaningful, open, conversations with you to understand:

- What matters to you in your daily work?
- What helps make a good day?
- When you are at your best, what does that look like?
- and what gets in the way of a good day?

Now, before we get started, I'm going to turn it over to Val for a moment, "Val, can you share why you are interested in what matters to your team and what makes a good day for you?"

2. Val ~ purpose of the conversation

Share why you are interested in what matters to staff.
Share what makes a good day for you.

3. Sue ~ Move into asking questions as outlined in the guide <u>(choose one question at a time before moving onto another question)</u>

Step 1: What matters to you? Build on assets and bright spots
So when we think about bright spots or assets….Would anyone like to share (ask these first):
Why they decided to work in health care?
What makes you proud to work here?
What is the most meaningful or best part of your work?
What matters to you in your work?
How do you know when you made a difference?
When your team is at their best…what does that look and feel like?
What makes a good day? (ask this one last)

Step 2: Identify unique impediments to joy in work "what are the pebbles in your shoes?"
So what gets in the way of what matters? What are "the pebbles in your shoes?"
What gets in the way of a good day?
What frustrates you in your day?

- statements to help conversation develop:
    - "Help me understand what that looks like?
    - What happened yesterday that would be an example of that?
    - Link to assets / bright spots: "What from our bright spots list would help us?"
    - Use brainstorming tools to generate ideas for overcoming impediments.

Step 3: Co-design next steps ~

- Based upon our conversation today, we have gathered these items as what you identify as bright spots or assets as well as the "pebbles in your shoes" or impediments. Anything else anyone would like to add?
- Looking at your list….is there something that we (all of us) could tackle starting today? A small test that could contribute to building on the assets and start to remove "pebbles from your shoes?"
    - Anything that you can think of that as individuals everyone could start working on?

Step 4: Use improvement science to test approaches to improving joy in work
Val and I will be facilitating these sessions throughout the course of the week to solicit input and feedback from the entire team.
To keep the momentum started each team will identify, from their list, like you did, what they could start tackling today….. because improvement is part of our daily work, something that is an essential part of each person's role… May be as simple as "I will say hi to two people in the hall today" Or I will ask 1 colleague if they need help with something.

I will be creating a communication board to display bright spots and "pebbles in your shoes"…. not only what comes out of our conversations throughout the course of this week, but also as an ongoing indicator of how to measure improvement daily as well as to capture "bright spots" what made today great and additional "pebbles" as they arise.
The goal is to review the board as a team daily and provide brief updates…
Any thoughts / recommendations on where the board could be placed and what it could look like?

Closing

- **Sue** ~ I really appreciate you taking the time to share what your bright spots are in your day as well as your pebbles in your shoes. The intent of today was for all of us to understand:
- What matters to you in your daily work?
- What helps make a good day?
- When you are at your best, what does that look like?
- and what gets in the way of a good day?

Then we can begin to individually identify how we can contribute to a good day, and together start to work to removing the pebbles.

Appendix P

Bright Spots Communication Board

Appendix Q

Summaries "What matters to you?" Conversations

Session Number	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
Date **Time** **Mode of participation**	9/20/2021 08:00 - 0:930 All participants virtual	9/21/2021 17:00 - 18:30 All participants in person	9/22/2021 11:00 - 12:30 No attendees	9/22/2021 19:30 - 21:00 4 In person; 3 Virtual	9/23/2021 20:00 - 21:30 Virtual	9/24/2021 12:30 - 14:00 Virtual
Name of participants and role	Melanie (NT) Amelia (RN) Jasmine (RN)	Erika (Inpatient Nursing Supervisor) "We need to remind ourselves of what's good in our day."	No attendees	Charity, Travel RN, virtual Ricki, Unit Secretary, virtual Marcella, Travel RN, virtual Megan, RN (Charge RN), in person Nciole, RN, in person Marissa, RN, in person Cora, RN (Charge RN), in person	Kylie (Charge RN) Monica (Charge RN)	Nick (RN)
Bright Spots						
Why decide to work in Healthcare?	Experienced amazing care in the past. Caring compassionate RNs. Listened, pushed me when needed. There when I needed someone. Took care of family members who had experienced a stroke	Interest in science. Naturally curious how things worked. Nursing was way to participate with / serve the community with science.		Family in hospital for care. Want to make a difference. Travel, see different aspects of healthcare. Own experiences as patient. Helping people. Seeing the difference we make. Progress you get to see in patients. Impact someones life. Cared for loved ones - treat family / patients how you would want to be treated.	Always wanted to be a nurse. Played with grandmothers stethoscope/ Band - Aids. Wanted to help people Various options in nursing.	Family in hospital - saw how the nurses interacted with family at the bedside
What makes you proud to work here	Positive outcomes for our patients.	Proud SH ~ doing all these wonderful things for the community. Vaccinated, things we offer. Proud 4 S~ Part of growing team / mentor and coach. Be an active member in it.		Proud 4S - skill set, "neurology" - crazy / busy floor - strong bonds, skills, teamwork (busy, people recognize and people come over and help, initiative to be helpful / support). Teamwork with providers. Proud SH - SH is known for being good. Support, leadership. We see alot here…we are able to respond / provide the care needed.	4 S - Patient population. Learning. Young and older patients. Love neuro. Teamwork, can count on people to take care of patients when you are unable. SH - good place to work; enjoy. Don't know SH really as a whole. Focused really on the unit. Started out as a NT at Lakeland. Moved to GR to go to nursing school. Was an easy transition.	4S - night shift team. Worked through difficulties together - young night shift. (Nick 1 year and 4 months) SH - Well established, premier hospital, values they uphold. Magnet certification., hold ourselves to higher standards. High quality team members - workers
	Various challenges - allows increase in learning to expand knowledge and skills					
Best part / most meaningful	Brighten a patients day, make it easier. (best part, most meaningful) Share positive experiences to lift up patients	Bedside ~ patient connections. How we learn from eachother. Leadership ~ connections with new and seasoned staff. Building bonds with others. Helping them see they are on the right path.			Patients. Being able to care for patients/families. Giving the best that I can. We get along pretty well as a team. Love patient population and the team. Being able to sit and talk with patients.	Explaining to patients and family. Helping educate so they can move forward… explain what future could look like. Helping to guide our new grads, new employees.

	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
Good day	staffed well enough.	When the team is "wrapping up" their shift or people saying "thank you" Nobody died Seeing the staff relax after the shift		When in charge, everyone feels supported. My patients are all alive, patients are stable. Work with people you like. (non-pull) Nurses and techs aren't drowning. Had a good laugh together - had a minute of the day to laugh...create a bond with people on the floor. Do activities outside of work.	Ratios at night - starting out the shift with the right ratios. End shift with a simle and leaving knowing I did the best that I could. Team communication. Can pick out who has a tough assignment ~ focus on each other. When drowning, help each other. Aware of those around you. Teamwork ~ some night connection can be off, and others we are one....	Seeing growth in someone. .... Understanidng things differently.... Seeing good team work and collaboration.... No negative talk.
	staffed with own staff versus non - neuro staff. Own staff know where stuff is...it takes time with non -					
	Had time to interact intentionally with one or more					
	Nobody dies					
	Being pulled can be refreshing. Heavy on 4 South at times. Allows for a change in scenery.					
	No challenging /abusive patients or families.					
Pebbles in Shoes						
	Not having supplies we need, primarily on midnights. Blankets, bed pans, briefs. Linen supplies.	Staffing ~ charge nurse in 3 patient assignment. Running shorter than anticipated. Having a sense of how your night will go and then it changes.... Inpatient supervisor having to function as safety attendant. Rooms not being stocked ~ things that make the work harder 3 RNs called in one night (didn't call in, just marked themselves as ill on the assignment sheet) Bad attitude ~ as supervisor always feeling pressure to motivate / morale of team		When a patient isn't doing well and the provider isn't taking my opinion into consideration. New grad nurses and pull nurses ~ not able to engage and pitch in on the unit (Teamwork noted as a bright spot - however, teamwork is more present when someone is crashing, not really with toileting..will help when patient is crashing, but not when the nurse or tech is crashing).	Patients family / ruder patients - can influence how a night can go...try to help the staff with these patients. Staffing - rations / acuity When we are down a secretary - in charge nurse, many roles Fresh new grads - just off of orientation while precepting a new team member. Trying to help those off orientation as much as possible as CN. Sometimes feel like you have to micromanage the new grads when they are on.	Negative chtter - dreading the shift.... Negative energy spreads quickly Negative talk - triangulation - gossip - bashing each other behind each others back...

	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
	Takes time to get supplies. Going to other units to borrow.	Trust with Charge Nurse RN - building trust would assist with retaining staff. Coming off orientation..getting together at someones house.		Supplies running out - blue pad, fitted sheet	We are always the floor running the lowest - always down a NT. Numbers with heavy acuity. Hospital supervisors comment "you are always the ones running down." When tight, we have to focus on those with increased acuity versus those who are stable.	Poor communication - poor collaboration...poor delegations.... Resulting in surprises RN should go to CN... not the right receiver for the information
	Not having staffing you need	New nurses have to prove themselves before getting recognition from the charge nurses.		Meds in one pyxis but not in the other	When come off of orientation, we don't have extra hands. We would	Not able to do self care prior to shift
	When day feels tasky - just checking things off of a list. Not having time to intentionally interact.	if new grads aren't trusting CN, it will make their shift. Feeling trusted to do a job... building confidence in staff from the charge nurses.		Staffing ~ not getting the care the patients deserve Feeling guilty due to inability to deliver care wanting to deliver In 5 patient assignments during day shift. Working every day in 5 patient assignments Charge nurse taking on multiple roles at once ~ take patients, be the tech, do ECGs, staffing, Unit secretary. Spread too thin, things slip through the cracks.	EKGs ~ EKG techs no longer in the role. Charge RNs, RNs and techs do ECGs on the unit now.	Team around me can influence...some individuals are positive and others are negative. Positive meaning they are willing to help / collaborate whereas negative are lazy...not willing to help... could be 4 south staff as well as pull or resource staff.
	Challenging patient. Both population as well as aggressive.			Patients transferred from ICU use to 1:1 ratios and now in 1:5.	Voalte phones - don't have enough phones	Pebbles contribute to the toxic environment
	Alarm fatigue ~ tired of running back and forth.			Providers - ordering tests prior to discharge at the last minute (COVID)	supply - never fully stocked - BP cuffs, thermometer probes, run out of blankets every night. Don't come up to floor...even when we pre-emptively order.	
	Burnout of own staff			Some people always get call lights and others are not helpful. Teamwork depends on who is working.	It's so busy sometimes, beyond what I can handle so I forget.	
				Pull nurses	We need more BP cuffs.	
				Some people show emotions - frustrated, not frustrated.		

Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
Brainstorming Ideas	Stock in am an mid day (supplies now being delivered by tugs...this is new)	What supplies do you need in the room? What was missing today?(hand sanitizer)~ could this be on the communication board?	Resource - maybe if we help them they will grow and support us as well. New nurses - expectations are not realistic ~ how can we help our new nurses? Sit down with them, what's going on... help them prioritize.	Indivdualized care for each person - pull in CN	Change how we can start off the shift. Say something positive ~ someone notices how I am
	Staffing - refer people who are good employees to work with	Pod Buddy ~ checking in with one another	Precepting - amazing skill set, strong foundation	Extra nurse on flor to help the other new grads...help with questions...Maybe someone just for the first four hours of a shift... to help those new off orientation.	Don't like talking about gossip. Walk away .... Shut it down.
	Train. And then they leave...keeping staff we train	Welcome to the unit ~ getting to know people	Students - we all have students - help them with their skills, bring them with me (RN) to see things and provide experiences. Go with CN.	If yu take the last thing ~ order as you take the last one, or the second to last one. Put an adult ambu bag in each room Issues with TUGS - 3rd shift crew and supply chain "Mary" NRB and Venturi masks Pro-actively order supplies order BP cuffs everynight ... maybe order more throughout the day so we have them? Order BP cuffs.	When a patient is declining or need help ~ communicate with CN first - to ensure the right receiver for the information.
	Float pool - "enjoy the unit then they will want to stay"	Charge nurse not welcoming new team members/pulls/resource... should welcome to the unit, introduce themselves, checking in with other team members. Other team members play similar role. If leaders aren't doing it, others follow suit.	Power hour - last rounds - replace things (supplies) if out. If you have time, stock things when you take the last of something. Tell someone . Hold yourself accountable.	ECG's - NTs - can they do them? NT orientation? ECG training?	New people rolling in and out....pull staff....
	Teamwork and different personalities (why would they want to stay on 4S?)	Develop expectations of charge nurse...	Supplies we don't even use... old PCA tubing. Inefficient storage, use of supplies.	New grad float pool can choose to stay or choose to go - what to do to make them choose to stay: Form a bond, include in conversation Snap chat, "inclusive" Students - leadership student on midnight shift. We are one team, we will have your back	Prevent the spread of negativity Shut down the negative talk

	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
	Fit in, not be an outsider. Could intentionally connect. Go to gym together, go to breakfast,	Charge nurses ~ define expectation with check in... auditing ~ student nurse, pull, resource,				Role of preceptor - support the new hires...give them the tools
	Clinical student nurses - how to engage: Teamwork friendly family. Extra activity, making them feel appreciated. If something happens letting them know we are there for them. Let them know they are doing great. Give them feedback in the moment.					Help others realize when they are not being help ful (i.e...there's a bed alarm going off...and someone doesn't get up to get it).....
	Alarms - NT assignment (8 at one end and bed jumper at the other end, "just assignments" - in the past balance of both....not really even...equality .... In assignments they try to make it even... "go to car crying"					
Try now	Assignments			How interact with students, pulls, resource staff. Readily identify which supplies we need and which ones we don't use (get them off the unit). Mirror supplies	Mirror pyxis BP cuffs Non - rebreather - adult, not peds. NT orientation - ECG training?	Charge nurses - gossip and what is their role in shutting it down.
Board ideas	By MDI board			Meme Simple, quick to use Sticky note		Bright colored, easily noticeable, large bright print, bright colored sticky notes.
	bright, cheery, colorful					

Appendix R

Pull Card Front and Back

Caring is the essence of nursing. – Jean Watson

Thank you for joining our 4S RN team today!

Manager: Val Tumbleson 11375
Night Supervisor: Erika Vargo 352-6117

Staff checkpoint at 1100 & 2230.
Your CN today is _____ @ 75030
Your Buddy is _____ @ _____
Your NT is _____ @ _____

Front Desk Phone #: 11440
Front Med Room # & Door Code: 4286
Back Med Room # & Door Code: 4306
Clean Utility Door Code: 1234
Nutrition Room Door Code: 1115
Break Room Door Code: 1115
Vitals @ 0600, 1000, 1400, 1800, 2200, 0200
I/O and clear pumps Q8: BY 0600, 1400, 2200

4S Helpful Hints

- Please huddle with your Team shortly after report, before lunches, and prior to the end of your shift to ensure everyone will leave on time.
- Charting can be done in the Allied Health Room or at the back nurse's station. Charts are in the copy room across from 4274.
- Tube station is at the front nurse's station by the secretary. Code: 1115
- Meds for rooms 4251 – 4258 and 4266 – 4276 are in the Front Med Room and 4259 – 4265 and 4277 – 4282 are in the back Med Room. The code for the med cubbies in the med rooms is 2 & 4 (press together) and then 3.
- Med Drawer Codes in patient rooms: 2244
- Orange Medication Box Codes: Room #

.

GO TEAM!

Appendix S

Facilitating Bright Spots Communication Board Charge Nurse Guide

Purpose of the Bright Spots Communication Board
The purpose of the Bright Spots Communication Board is to display "Bright Spots", "Pebbles in your shoes" and strategies to increase "Bright spots" and chip away at the "Pebbles in your shoes" which were identified during the initial "What matters to you?" conversations. The Bright Spots Communication Board is intended to show progress in achieving these strategies as well as allow the opportunity to identify "Bright Spots" and "Pebbles in your shoes" on an ongoing basis.

Based upon the recent "What matters to you?" conversations, the current focus of the board is on supplies and staffing.

Supplies ~ identifying what supplies team members were missing during their shift as well as what supplies they have that they never use. What supplies are in the patient room that they don't need? What supplies are not in the patient room that they need.

Staffing ~ to capture intentional actions by 4 South team members to assist in enticing others to want to work on 4 South as well as stay on 4 South. What about the 4 South environment would make someone want to stay as part of the 4 South team?

The focus can, and will, change as "pebbles" are resolved and new one's form.

Role of Charge Nurse in facilitating updates / conversation of Bright Spots Communication Board
As charge nurses you are asked to facilitate the Bright Spots Communication Board during daily huddles by reviewing and encouraging brief dialogue for each section as described below. As frontline leaders on the 4 South team, you are asked to role model positive attitude and help in encouraging others in identifying "Bright Spots" or in assisting potential strategies that the team can implement to overcome "Pebbles."

Role of Charge Nurse in facilitating each section of Bright Spots Communication Board

Bright Spots

ASK

- Can anyone share a Bright Spot of their day?
- What is making today a good day thus far?
- Can anyone share a difference they made with a patient or family member today or in a recent shift?

(If you have guests on your unit ~ students, pull nurses, resource staff, etc…. highlight them as a bright spot!)

WRITE ON BOARD

- Using markers ~ quickly jot down bright spots on the Communication Board.

Encourage team members to write on the board in the moment as bright spots occur, they don't need to wait for huddle!

Pebbles in Shoes

ASK

- What is getting in the way of a good day today?
- Any ideas / thoughts how we can partner to address / tackle what is getting in the way of making today a good day?

WRITE ON BOARD

- Using markers ~ quickly jot down on Communication Board what is getting in the way of making today a good day.

Encourage / role model dialogue on how to overcome, or at least peck away at, what is getting in the way of making today a good day.

For example, if staffing is getting in the way of a good day ~ acknowledge, yes ~ we are running under what we would call for… have people connected with their buddies and / or included NTs in prioritizing care / needs for their team? Anything that the CN can lean in on and assist with? Anything that could be done differently with the assignment ~ if not now, then for the next shift?

Supplies

The goal is to identify specific opportunities with supplies and where they are housed. During the "What matters to you?" conversations it was shared that the team is often searching for supplies and that supplies are not always stored in the ideal location.

During huddle

- Remind team members to use the sticky notes to identify:
  - What supplies do you need that you can't find?
  - What supplies do you have that you don't need?
  - Supplies that need to go in room?
  - Supplies that need to come out of room?

Staffing

As a team, making 4 South a unit that others want to work on will help with overall staffing. The team needs to welcome EVERYONE and support EVERYONE to the unit.

During huddle

- *Intentionally* welcome all non-4 South staff to the unit.
- Welcome them and thank them for partnering with the 4 South team today.

Additional charge nurse expectations for creating a welcoming and supportive environment on 4 South:

Introduce yourself to every non - 4 South team member who is on your unit.

- "Hi XXX., my name is XXX. I am the charge nurse. Welcome to our unit. I will be checking in on you throughout the shift, but if you need anything, please let me know.
- "This card (provide individual with "pull card") has some key information on it, including my number."
- "Have you been to our unit before?" (If not…) "let me give you a tour."

- During course of shift intentionally connect with each team member, minimally once every 4 hours, to see if they are doing OK or if they need assistance.
- Ask them ~ "any bright spots so far in your shift that you would like to highlight?" AND "any pebbles I can help with?"
- It is the expectation of the charge nurse to create a welcoming environment. As front-line leaders on the 4 South team, you are role modeling behavior that is both appropriate, and contributing to a welcoming environment, as well as behavior that is not. Be mindful of the conversations you are taking part in…. negatively talking about others, "throwing them under the bus," saying things you wouldn't say if they were standing next to you….are all behaviors that contribute to a non-welcoming environment ~ which, ultimately, impacts your staffing on the unit.

Appendix T

Neuroscience Clinical Unit Rolling Twelve Month Transfer Percentage

	2021					2022
	August	September	October	November	December	January
Overall	34.40%	36.60%	37.40%	36.70%	40.90%	30.30%
RN	31.10%	34.60%	33.20%	31.60%	35.50%	25.70%
NT	39.90%	39.90%	43.90%	44.30%	48.80%	37.00%

Appendix U

Neuroscience Clinical Unit Rolling Twelve Month Churn Percentage

	2021					2022
	August	September	October	November	December	January
Overall	61.30%	70.20%	71.60%	74.90%	81.70%	67.30%
RN	55.10%	64.30%	63.80%	65.90%	71.10%	51.30%
NT	71.80%	79.70%	83.70%	88.60%	97.60%	90.40%

Appendix V

Comparison of Like Units Twelve Month Rolling Transfer Percentage

	2021					2022
	August	September	October	November	December	January
Neuro	34.40%	36.60%	37.40%	36.70%	40.90%	30.30%
Unit A (Size)	18.80%	22.90%	27.10%	27.20%	27.30%	29.80%
Unit B (Size)	20.90%	27.70%	26.10%	24.40%	29.60%	32.80%
Unit C (Population)	11.00%	11.30%	11.50%	11.80%	16.20%	17.90%

Appendix W

Comparison of Like Units Twelve Month Rolling Churn Percentage

	2021					2022
	August	September	October	November	December	January
Neuro	61.30%	70.20%	71.60%	74.90%	81.70%	67.30%
Unit A (Size)	22.90%	27.00%	31.30%	31.40%	31.50%	32.10%
Unit B (Size)	48.00%	59.60%	58.70%	57.70%	66.00%	75.60%
Unit C (Population)	40.50%	41.40%	46.20%	47.20%	56.80%	62.70%

Appendix X

Travel RN Headcount per Unit by Month

	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22
Neuroscience Unit	3	6	9	11	10	9
Unit A (SIZE)	0	0	0	0	0	0
Unit B (SIZE)	0	0	1	1	1	2
Unit C (POPULATION)	2	5	6	4	3	3

Appendix Y

Figure 4. RN Vacancy Percentage

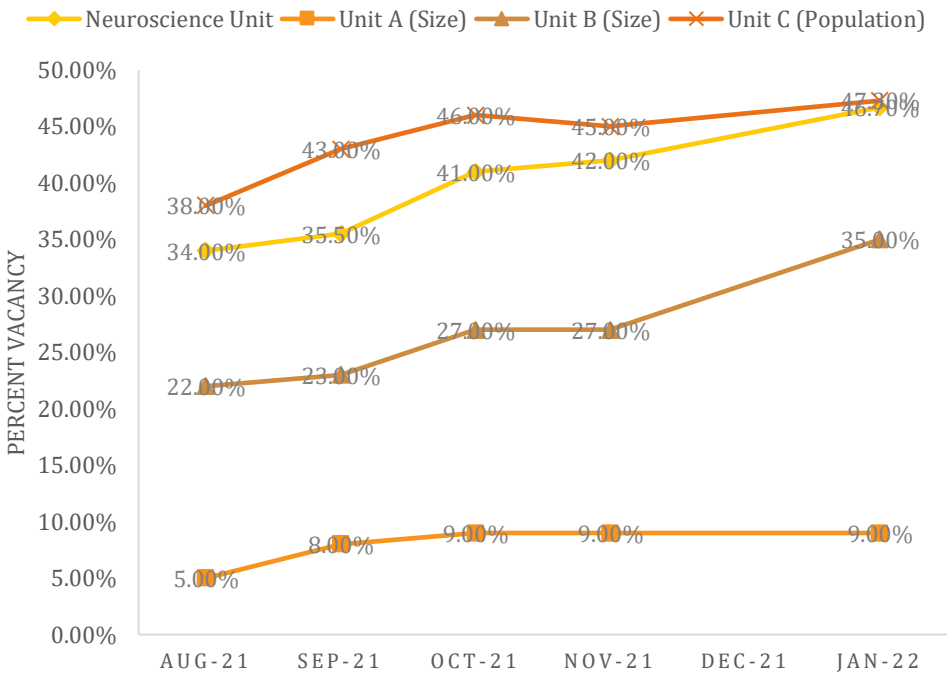

Figure 4. Monthly comparison of RN vacancy percentage between neuroscience clinical unit and units A, B and C from August 2021 to January 2022.

Appendix Z

Figure 5. Belonging Overall

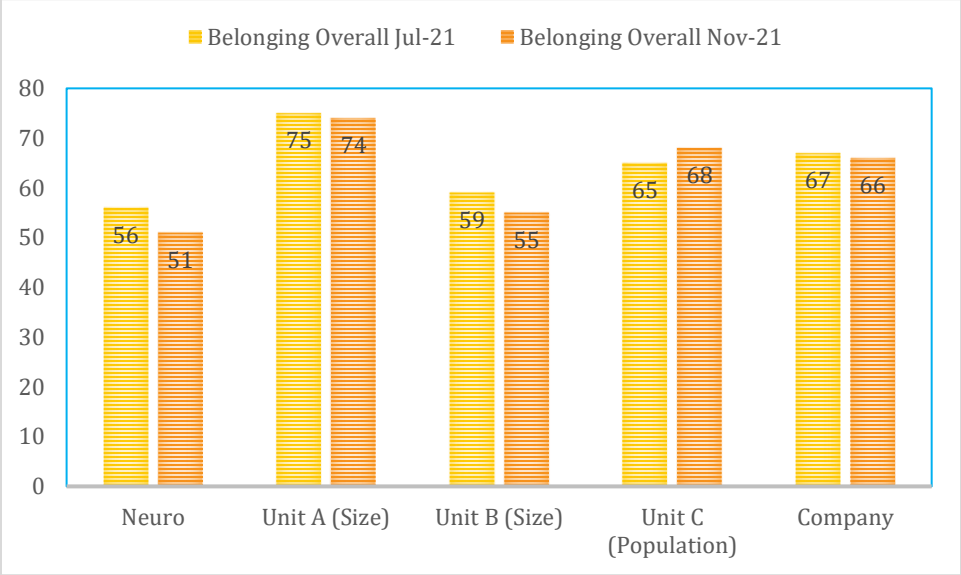

Figure 5. Comparison of overall belonging scores for neuroscience clinical unit in relation to Units A, B and C as well as the healthcare organization (company) overall.

Appendix AA

Figure 6. Belonging RN

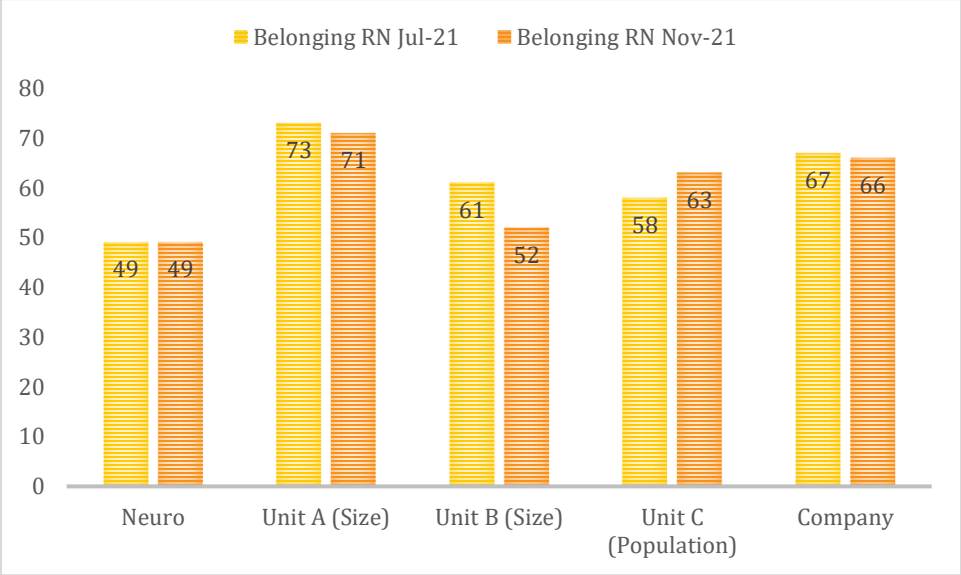

Figure 6. Comparison of RN belonging scores for neuroscience clinical unit in relation to Units A, B and C as well as the healthcare organization (company) overall.

Appendix BB

Figure 7. Belonging NT

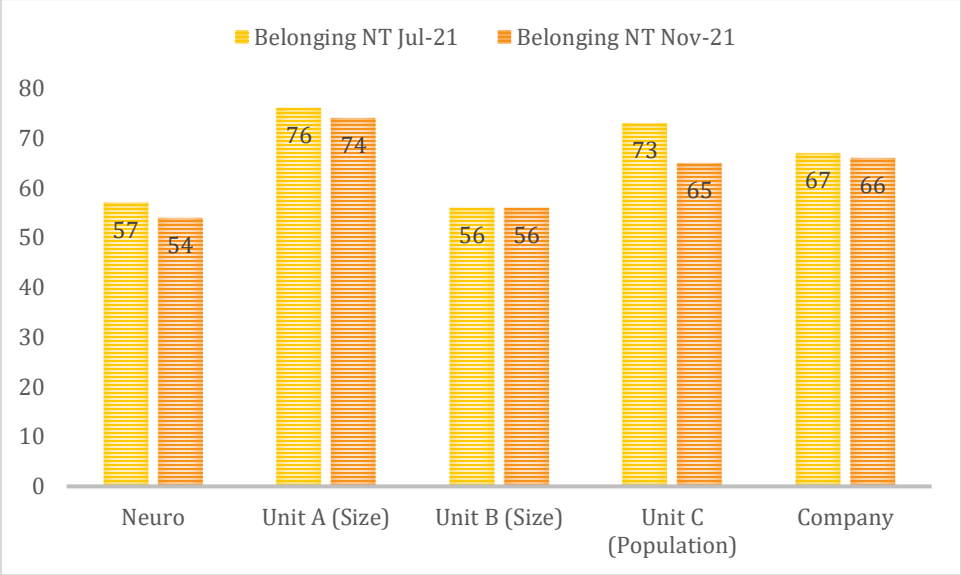

Figure 7. Comparison of NT belonging scores for neuroscience clinical unit in relation to Units A, B and C as well as the healthcare organization (company) overall.

Appendix CC

Figure 8. Engagement Overall

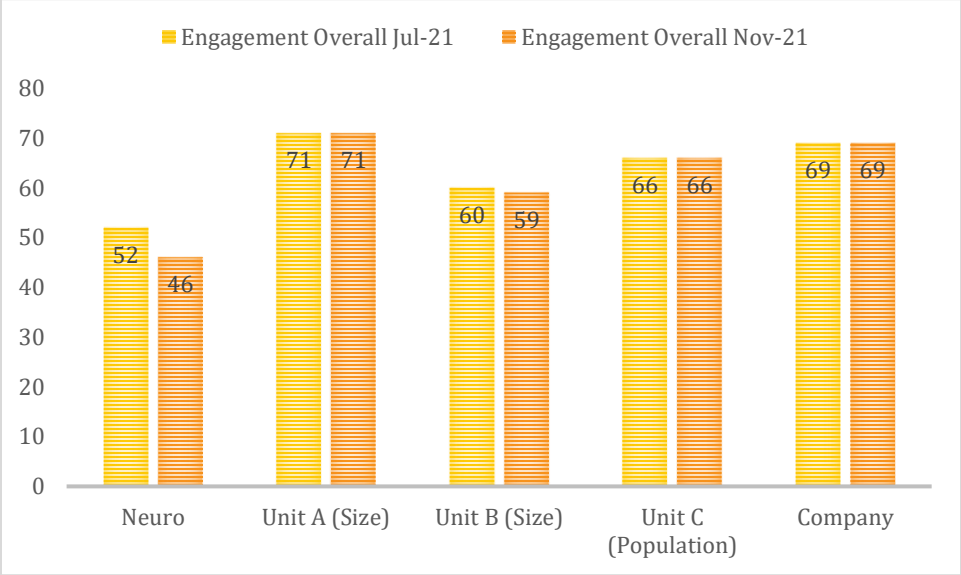

Figure 8. Comparison of overall engagement scores for neuroscience clinical unit in relation to Units A, B and C as well as the healthcare organization (company) overall.

Appendix DD

Figure 9. Engagement RN

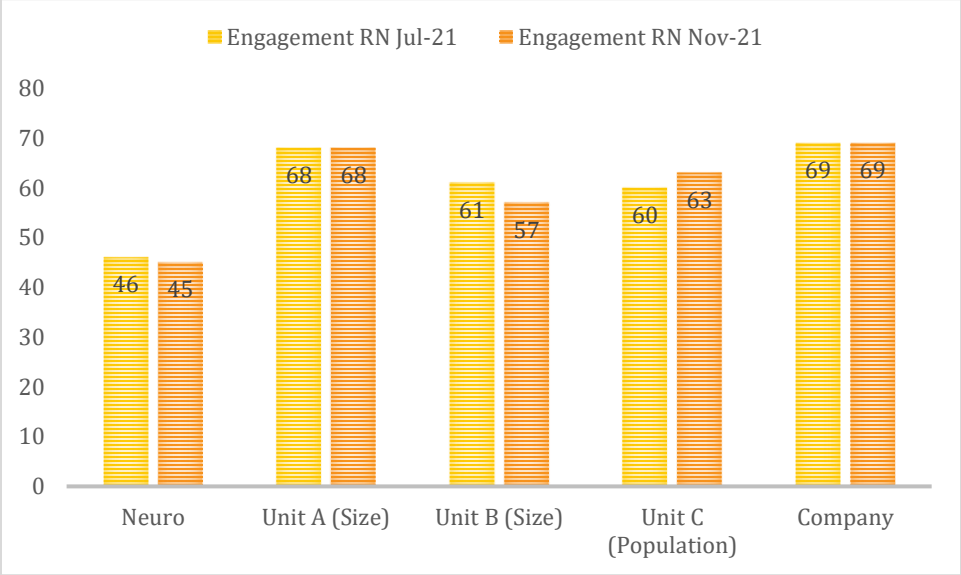

Figure 9. Comparison of RN engagement scores for neuroscience clinical unit in relation to Units A, B and C as well as the healthcare organization (company) overall.

Appendix EE

Figure 10. Engagement NT

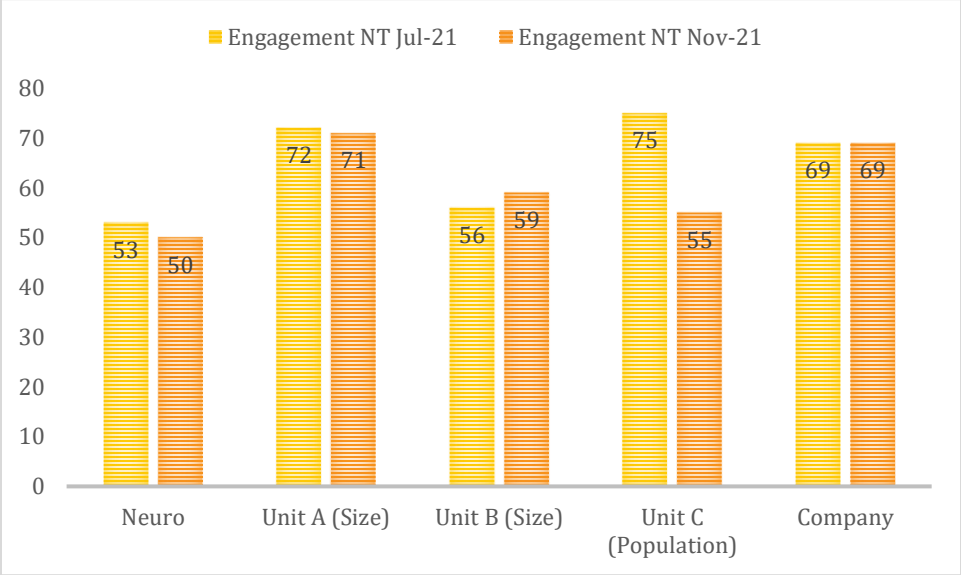

Figure 10. Comparison of NT engagement scores for neuroscience clinical unit in relation to Units A, B and C as well as the healthcare organization (company) overall.

Appendix FF

Comparison of Like Units Likelihood to Recommend Top Box Performance

	2021					2022
	August	September	October	November	December	January
Neuro	69.70%	94.70%	54.60%	60.90%	40.70%	63.80%
Unit A	60.00%	79.20%	55.60%	74.10%	69.20%	88.00%
Unit B	68.90%	69.20%	65.50%	65.2%	73.90%	71.40%
Unit C	72.20%	66.67%	60%	70.60%	50.00%	80.00%

Appendix GG

Budget

Personnel expenses								
Activity	**Impacted role (If applicable)**	**Number of team members impacted (If applicable)**	**Hourly cost per team member**	**Total hourly cost (number team member * hourly cost)**	**Hours per activity (If applicable)**	**Frequency of activity per team member**	**Total hours activity**	**Total (Number individuals * total hours)**
"What matters to you?" conversation								
	Charge nurse	13	$31.50	$409.50	1.5	1	1.5	$614.25
	Registered nurse (excludes charge nurse)	22	$30.00	$660.00	1.5	1	1.5	$990.00
	Supervisor	1	$40.00	$40.00	1.5	1	1.5	$60.00
	Nurse manager	1	$55.00	$55.00	1.5	7	10.5	$577.50
	Non - licensed support staff	28	$15.50	$434.00	1.5	1	1.5	$651.00
Charge nurse meetings								
	Charge nurse	13	$31.50	$409.50	2	3	6	$2,457.00
	Nurse manager	1	$55.00	$55.00	2	6	12	$660.00
Facilitator / coordinator of project plan	Post - Master's DNP student	1	$50.00	$50.00			60	$3,000.00
Total personnel expenses								**$9,009.75**

Supply expenses			
Equipment / supply	**Quantity needed**	**Cost per item**	**Total cost**
Magnetic / Dry Erase White Board (8x4)	1	$360.00	$360.00
Dry erase markers	1 package	$7.99	$7.99
Sticky notes	1 package (incl. 5 pads)	$10.49	$10.49
Additional Supplies Communication Board			$15.00
Total supply expenses			**$393.48**
Total expenses			**$9,403.23**

Projected savings						
Activity	**RN orientation costs 2020**	**Number RNs oriented 2020**	**Cost per RN (360 hours orientation)**	**Savings 10% reduction RN churn**	**Savings 25% reduction RN churn**	**Savings 50% reduction RN churn**
RN churn, reduction of	$227, 415.00	22	$10,337	$20,674	$51,685	$113,707