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Evaluating Nurses' Turnover Intention and Organizational Commitment Following Stroke Unit Staffing Changes: An Evidence-based Quality Initiative

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Abstract

Nurses are known to be overworked, overwhelmed, undervalued, and understaffed at dangerous levels throughout various inpatient hospital units across the United States (U.S.). Hospital nurse turnover is a significant issue that has accelerated since the COVID-19 pandemic, resulting in economic impacts and other burdens for organizations, individuals, and communities. Evidence suggests that evaluating Registered Nurses' Turnover intention (NTI) and Organizational Commitment (OC) can help maintain a ready and capable team of skilled RNs; however, most healthcare organizations (HCOs) do not collect or analyze NTI and OC data and focus on staffing numbers and monetary incentives to get adequate nursing numbers. Research shows that RNs with higher OC tend to demonstrate lower NTI and stay in their profession, jobs, and HCO longer. In a local example of one 32-bed stroke unit at a large regional medical center in the Midwest, high staff RN attrition resulted in inadequate RN staffing and closed unit beds, delaying patients' access to timely care. Despite increasing staffing by 3.6 Full-Time RNs, the degree of NTI and OC among nurses working on the stroke unit remains unknown, placing the unit at increased risk of closing beds and care access in the future. Therefore, the purpose of this Quality Improvement Project was to provide new data to the Nursing Leadership and the healthcare executives who oversee RN staffing. The project was guided by the Plan-Do-Study-Act framework and aimed to evaluate the relationship between NTI and OC through a systematic record review of staff nurse questionnaire response data following a unit's recent increase in nursing staffing levels. Due to the sensitive nature of the data, the project's data collection could not occur. Despite the limitations encountered, the project's lessons learned, and the proposed use of the NTI/OC Questionnaire in this Report can offer valuable insight to RN leaders in understanding staff RNs' intent to leave and commitment to the organization, which may ultimately help to maintain a ready and capable nursing team and prevent avoidable nursing turnover and delayed patient access to care services.

Keywords: Hospital Staff Registered Nurse, Turnover Intention, Organizational Commitment, Nurse Leaders, Surveys and Questionnaires, Quality Improvement

Introduction

Evidence suggests that registered nurses (RNs) are overworked, undervalued, and understaffed at dangerous levels and throughout various inpatient hospital units across the United States (U.S.); the COVID-19 pandemic significantly accelerated the rate at which hospital RNs voluntarily leave their jobs, healthcare organizations (HCO), or the nursing profession altogether (i.e., *hospital staff RN turnover* or *attrition*). According to a literature review conducted for this project, the abovementioned issues associated with hospital RN turnover predate the pandemic, and evidence suggests long-term strategies are necessary to address the current shortage of qualified RNs available and willing to fill acute care hospital staff RN vacancies (sometimes called a *patient care crisis*). Experts call for immediate and intentional efforts by RN leaders and policymakers to prevent hospital staff RN turnover and retain experienced RNs in direct-care roles. Recent reports suggest that evaluating *Registered Nurse Turnover Intention* (abbreviated throughout this report as *NTI*) and *organizational commitment (OC)* can help RN leaders retain and maintain such a nursing team in their respective units. *NTI* can identify avoidable turnover before it occurs and aid front-line RN leaders (i.e., Nurse Managers) in retaining experienced RNs in their respective units; however, evidence indicates that many HCOs still need to collect NTI and OC data.

Background

Hospital staff RN turnover rates have spiked in recent years, and the evidence from the literature indicates that the RN labor shortage is a reality for front-line RN leaders and hospital nurse administrators, who must maintain a ready and capable nursing team. Research indicates that high RN turnover can cause economic and non-economic consequences for HCOs (Bae, 2022), increase workloads and, thereby, burnout in remaining staff RNs (Galanis et al., 2023), and delay timely access to acute nursing care for patients seeking hospital services (Lasater et al., 2021). Inadequate RN staffing related to high RN turnover at a large regional medical center in

the Midwest led to one 32-bed stroke unit closing beds, which delayed the patient's access to timely care (as these patients were diverted to non-specialized medical units within the hospital).

Hospital Staff RN Turnover

The rising number of RNs leaving direct-care (i.e., *bedside)* nursing hospital jobs has also added to RN leaders' responsibilities post-COVID-19. One U.S. survey conducted by a national RN recruitment firm found that the average staff RN turnover rate for acute care hospitals in 2021 was 27.1% (see Appendix A, Figure 1 for a sample of U.S. Hospital RN Turnover rates from 2018 to 2022, based on these data from the *2023 NSI National Health Care Retention & RN Staffing Report* by NSI Nursing Solutions, Inc., 2023).

According to the 2023 survey results from NSI Nursing Solutions Inc., each percent change in RN turnover will cost or save the average hospital $380,600 annually. Since the COVID-19 pandemic, HCOs have faced diminishing profit margins and rising labor costs (AHA,2022). The rising number of RNs leaving their bedside duties has also added to RN leaders' responsibilities post-COVID-19. Travel RNs (i.e., *RNs with temporary contracted assignments*) increase hospital labor costs by as much as 200% (NSI, 2023); therefore, retaining permanent hospital staff RNs is a top priority.

To accommodate patient care and reduce the risk of future bed closures on the 32-bed stroke unit, the hospital administrators increased the unit's RN staffing (improving overall RN-to-patient ratios) and added one RN per 12-hour shift (or 3.6 Full-Time Equivalent [FTE] RNs; temporarily filled by three Travel RNs) to the unit's RN workforce. However, the evidence-based literature indicates that assessing all root causes of hospital staff RN turnover is necessary to maintain a ready and capable team of RNs and ensure the problem does not reoccur.

NTI and OC

As stated above, recent reports suggest that evaluating NTI and OC can help identify the root causes of hospital staff RN turnover and provide a reliable forecast of an RN workforce for

hospital RN leaders; however, the evidence demonstrates that most HCOs still need to collect NTI and OC data, leaving the potential for future The definitions for Turnover Intention (TI) and OC are presented below; however, the value of the two measures (i.e., NTI and OC) for RN leaders and the role the measures serve in fulfilling this project's proposed purpose is discussed in the Literature Review section of this Report. Specific reliability and validity statistics related to the NTI and OC scales are discussed in detail in the NTI/OC Questionnaire section of this Report.

Turnover Intention (TI)

Over a century of evidence demonstrates that *an employee's intention to leave their job, organization, or profession* (i.e., turnover intention [TI]) is a valid and reliable indicator of actual turnover in the employee (with high TI indicating a substantial likelihood of the employee's future turnover). Intent is a qualitative concept defined as *an anticipated outcome and the purpose for actions taken, thus guiding the action*. (National Cancer Institute [NCI], n.d.). Therefore, NTI, as used throughout this project, is *the intention of an individual RN to leave their job, HCO, or the profession*. NTI has been used in the hospital staff RN population by nurse researchers for decades but following the COVID-19 pandemic and increased turnover rates observed among hospital staff RNs, interest in and use of NTI accelerated. Studies have consistently demonstrated a strong negative relationship between OC and NTI (and between OC and actual RN turnover), and RNs with high OC tend to stay in their jobs and with the HCO longer than RNs with low OC, who are more likely to express an intention to leave.

Organizational Commitment (OC)

The measure, OC, has not had the same amount of attention among the hospital staff RN population post-COVID-19 as NTI; however, half a century of evidence from various organizations and throughout different professions demonstrate that OC is a valid and reliable indicator of employee retention and, therefore, an essential measure for maintaining a ready and

capable nursing team. OC is *a psychological state that characterizes an employee's relationship with their organization.* OC is strongly associated with an individual's intent to stay in their job and organization (Allen & Meyer, 1990). Many experts in human resource management and organizational development accept OC as a multidimensional measure, and studies have demonstrated that OC is related to several performance-related, behavioral, and affective job outcomes.

The NTI/OC questionnaire was developed as this DNP proposal project's primary data collection instrument to provide new data to one 32-bed stroke unit's RN leaders to aid in staff RN workforce planning efforts and enable proactive, focused, evidence-based interventions to retain experienced stroke RNs. The NTI/OC Questionnaire can be used among staff nurses with various levels of nursing licensure but was explicitly designed for hospital staff RNs in the context of this project as LPN anonymity was impossible due to the low number employed on the 32-bed unit when the author completed the unit nursing needs assessment (n = 2).

Problem Statement and Significance

The COVID-19 pandemic significantly accelerated the rate of *hospital RN turnover* and has become increasingly problematic for RN Leaders (i.e., Managers) who must maintain a ready and capable nursing team and for hospital nurse administrators who oversee RN staffing levels on various units (i.e., RN-to-patient ratios). Data reveals that 100,000 nurses left the workforce during the pandemic, and almost one-fifth (or nearly 900,000 of 4.5 million total RNs) report an intention to leave by 2027 (NCSBN & Forum, 2023). Several reports and studies have indicated that the hospital RN labor shortage post-COVID-19 has resulted in a *nursing crisis* and is an issue of national concern (American Nurses Association [ANA], 2021; Office of the Surgeon General [OSG], 2022). Experts in acute care nursing and the broader nursing profession call for urgent action from RN leaders and strategies from policymakers to address the current crisis.

In the local example, high hospital staff RN turnover rates led to one 32-bed stroke unit at a large regional medical center in the Midwest closing available beds on the unit because of inadequate RN staffing (i.e., the number of available RNs during the shift did not meet patient demand for stroke nursing care). The unit's bed closures led to patients being admitted to non-specialty medical units within the hospital and delayed patients' access to timely care. To prevent further bed closures, the hospital RN administrators and hospital nurse administrators increased RN staffing on the unit as previously described; however, evidence from the project's literature review demonstrates that identifying all root causes of hospital staff RN turnover is necessary to prevent the problem from reoccurring (as demonstrated in Appendix A, Figure 2 showing the Unit's Nursing Workforce by Employment Type).

RN per 12-hour shift, or an additional 3.6 Full-Time Equivalent (FTE) RNs, to the 32-bed unit's RN workforce (i.e., nursing team). Three Travel RNs were permanently assigned to the unit in September 2023 to temporarily fill the 3.6 FTE positions, increasing the total number of permanently assigned Travel RNs on the unit to 15 and resulting in Travel RNs (with a temporary or contracted assignment) making up a higher proportion of the unit's full-time hospital staff RNs than the 13 permanently employed full-time hospital staff RNs and demonstrating the need to identify the root causes of attrition on the unit.

Literature Review and Summary of Evidence

The first objective of this project was to review and synthesize evidence from the peer-reviewed literature to select an evidence-based NTI and OC questionnaire. A search for peer-reviewed records from the last five years (2017-March 2024) was conducted using the following databases: PubMed, Cochrane Library, CINAHL ProQuest, and TRIP. Since hospital staff RN turnover involves multiple complex variables, several search strategies were necessary to answer the PICOT question. The author conducted the searches between September 2023 and November 2023 in the abovementioned databases (with automated results last accounted for March 15,

2024) to search for the best available evidence with keywords derived from the following PICOT-framed question: (P) In hospital staff registered nurses on a 32-bed stroke unit experiencing high turnover/attrition and closed beds, how do (I) RN staffing improvements, compared to (C) higher RN-to-patient ratios (1:6), affect (O) NTI and OC in full-time staff RNs on the unit, (T) following the RN staffing change by hospital RN administrators? Keywords derived from the PICOT question used in the initial literature search include the following terms—"hospital staff RN", "organizational commitment," and "turnover intention"—all of which yielded four results. When limited to the last five years and studies from the U.S., no articles remained.

Despite the need for more research, as evidenced by zero records being returned on the initial search, the review identified two highly reliable outcome measures fit for the purpose of this project: NTI and OC. The following discussion provides a brief overview of hospital staff RN turnover research in the U.S. and presents evidence from the literature to demonstrate the magnitude, breadth, and depth of the current hospital RN labor shortage. The author will conclude the literature review with a discussion of the two identified measures (i.e., this project's proposed outcome variables) that can aid front-line RN leaders and hospital nurse administrators to maintain a competent and capable team of hospital staff RNs and thereby ensure access to timely, safe, high-quality care for patients seeking hospital services, which, according to the evidence from the literature, is urgently needed. Assessing NTI and OC within one questionnaire can aid RN leaders in maintaining a ready and capable nursing team, and the NTI/OC Questionnaire provides a starting point for future QI efforts by hospital RN administrators toward a sustainable RN workforce.

Hospital Staff RN Turnover

Despite substantial research efforts, the impending "nursing shortage" that experts have warned of for decades has become a reality for RN leaders and hospital nurse administrators in

U.S. acute care hospitals who must maintain adequate RN staffing to ensure safe, quality, and timely patient care. In the 2010s, conceptual models based on empirical evidence were developed to explain why RNs leave the profession (Gilmartin, 2012), and since then, the annual numbers for RN turnover research have almost doubled (from 10-20 articles between 2000 and 2010 to nearly 40 articles annually since 2011; Morioka et al., 2023). It is accepted that improved hospital RN staffing leads to improved patient outcomes, but evidence indicates that fewer RNs are available and willing to fill acute care hospital RN vacancies post-COVID-19.

The magnitude of hospital staff RN turnover observed throughout U.S. acute care hospitals during the COVID-19 pandemic is concerning, and the literature indicates that immediate action is needed to prevent remaining hospital staff RNs from leaving their jobs, HCOs, or the nursing profession altogether. According to Buchan and Aiken (2008), the U.S. has previously observed a cyclical phenomenon of nursing shortages due to increasing patient demand and a stagnant or more slowly growing supply of RNs; however, numerous recent reports from the evidence-based literature indicate that the hospital staff RN labor shortage post-COVID-19 is not cyclical (Aiken, 2002; Aiken, Sloane, et al., 2023; American Association of Colleges of Nursing [AACN], 2023; NCSBN & Forum, 2023). A nationally weighted estimate of 97,312 RNs left the profession during the COVID-19 pandemic (American Nurses Foundation [ANF], 2022), but according to The Bureau of Labor Statistics, by 2024, there will be more than one million RN openings (twice the rate observed in previous U.S. RN labor shortages). Experts are calling for immediate solutions as the consequences of high RN attrition are far-reaching, affecting the financial bottom line of HCOs, the future of the nursing profession, and access to timely, high-quality, safe nursing care for patients. The evidence suggests that strategies are needed to support RN leaders' and hospital nurse administrators' efforts to maintain adequate RN staffing.

An alarming number of experienced RNs left the nursing workforce during the COVID-19 pandemic, demonstrating the depth of the current crisis. The National Council of State Boards of Nursing (NCSBN) and the National Forum of State Nursing Workforce Centers (Forum) conduct the only national-level survey focused on the entire U.S. nursing workforce every two years, adding questions related to the COVID-19 pandemic and travel RNs to the 2022 *National Nursing Workforce Survey* (NNWS). From 2020 to 2022, there was an estimated loss of at least 200,000 experienced RNs from the nursing workforce due to retirement in respondents above 55 years old (Smiley et al., 2023). Reporting data from NCSBN and Forum (2023) revealed that an additional 100,000 nurses left the nursing workforce during the COVID-19 pandemic, and a further almost 900,000, or nearly one-fifth of 4.5 million RNs, intend to leave the workforce by 2027. The latest hospital staff RN reporting data reveals the magnitude of the crisis mentioned above, but unfortunately, the literature also indicates that the shortage of hospital staff RNs and the current state of NTI has a tremendous breadth that will not improve without action by RN leaders, hospital nurse administrators, and policymakers alike.

Over half a century of hospital RN turnover research provides evidence that ensuring the availability of a skilled and capable team of RNs is crucial for providing patients with safe, timely, and quality care. However, at the time of writing, and without accounting for organizational onboarding (i.e., training time), it takes a hospital, on average, 95 days to recruit and hire an experienced RN (NSI, 2023), indicating fewer experienced RNs are available and willing to fill hospital RN vacancies. Just as alarming, evidence indicates that public perception of pursuing a career as a BSN RN-prepared nurse may have changed since COVID-19. Reporting data from the American Association of Colleges of Nursing (AACN) Fall 2022 survey demonstrated that enrollment in Bachelor of Science in Nursing (BSN) programs declined for the first time since 2000 (McElroy, 2023). The evidence from the literature demonstrates the breadth of the crisis and warrants immediate action.

The proportion of voluntary turnover observed in recent years further indicates that the current hospital RN labor shortage is unlike previous shortages. One national survey reported that voluntary turnover accounted for 94.7% of all hospital separations reported in 2022 (NSI Nursing Solutions, Inc., 2023), and the authors of a McKinsey survey concluded that at the healthcare industry level, 42% of healthcare workers who quit did so without having a new job (De Smet et al., 2021). Moreover, it is significant to note that while hospital staff RN salaries were reported to be higher in the 2022 NNWS (due to the demand for nursing care from the pandemic and inflation), 12% of RN respondents surveyed reported "inadequate salary" as a reason for being unemployed, an increase from the 2.5% reported by RN respondents in 2020 (Smiley et al., 2023, p. S26). Lastly, 60% of hospital RNs reported an increased workload since the COVID-19 pandemic (Smiley et al., 2023), with patient care load cited as a reason for turnover in 58.05% of staff RNs who left Ohio hospitals (Ohio Nurses Association [ONA], 2023). The evidence indicates that hospital staff RNs' reasons for leaving their jobs, HCOs, or the nursing profession have changed since the COVID-19 pandemic, and based on the evidence-based literature, the profession must develop tools to evaluate these reasons and implement evidence-based strategies to reverse the crisis.

NTI and OC

Evidence from the literature demonstrates that TI and OC are two widely used measures determined to be valid and reliable indicators of future RN turnover and future RN retention, respectively. The NTI/OC Questionnaire can provide unit-specific insight to RN leaders into staff RNs' intention to leave (i.e., NTI) or stay (i.e., OC) and will be a starting point, providing insight to hospital nurse administrators into evidence-based QI approaches that help to maintain a ready and capable hospital staff RNs workforce. The role of the two measures in fulfilling this project's proposed purpose will be discussed below, but specific reliability and validity statistics are discussed in the NTI/OC Questionnaire section of this Report.

NTI

To proactively identify preventable turnover in experienced stroke unit RNs, RN leaders can assess NTI to evaluate whether the remaining stroke unit RNs intend to leave the unit or HCO in the future. In previous research, high TI in an employee indicates a substantial likelihood of that employee's future turnover and is, therefore, a practical measure to support RN leaders and fit for the proposed project purpose.

OC

Previous studies have demonstrated that RNs with high OC tend to stay in their jobs (i.e., with the HCO) longer than RNs with low OC, who are more likely to express an intention to leave (i.e., NTI). Since OC relates to an individual's professional relationship with their employer, it is also an important outcome measure for maintaining a ready and capable nursing team (Chang et al., 2019). Evidence from the literature indicates that as OC increases in an employee, anticipated turnover decreases in that employee (Pagilagan, 2017), and numerous studies have consistently demonstrated a direct relationship between OC and employee retention (Wang et al., 2017; Zhu et al., 2023). OC is, therefore, a practical measure to support RN leaders and is fit for the proposed project purpose.

Summary of Evidence

The proportion of RNs who voluntarily left hospital staff RN employment and the amount of time it takes to replace experienced hospital staff RNs demonstrates the breadth and depth of the current hospital RN labor shortage (which has also been called a *nursing care crisis*). The state of RN turnover intention in hospital staff RNs (i.e., 1 in 4 and referred to throughout this project as *NTI*) indicates immediate strategies are necessary to prevent a potential 25% of remaining hospital staff RNs from leaving the workforce. The NTI/OC Questionnaire will provide unit-specific insights to RN leaders, allowing them to be more efficient and effective through evidence-based strategies to retain hospital staff RNs in their respective units.

The current hospital RN labor shortage is exacerbated by the high turnover intention among hospital staff RNs (i.e., NTI), with more than 1 in 4 direct-care RNs considering leaving the acute care hospital RN workforce. In a repeated cross-sectional study conducted before and during the COVID-19 pandemic, Aiken, Sloane, et al. (2023) concluded that hospital RN understaffing and poor working conditions predated the pandemic and recommended that policies prevent chronic hospital RN understaffing one strategy to overcome the increased hospital staff RN turnover rates and shortage of available and willing hospital RN labor (chi-square statistic $L^2 = 7.05$, $df=4$, $p = .133$ indicated no overall change). Another strategy in the peer-reviewed literature (and feasible for the scope of the proposed DNP project) is regularly evaluating NTI and OC since the two constructs are valid and reliable indicators of hospital staff RN turnover and retention, respectively (Callado et al., 2023). With the help of the NTI/OC Questionnaire, RN leaders can optimize their efforts to retain their experienced hospital staff RNs and more efficiently and effectively maintain a ready and capable team of RNs, thereby ensuring patient access to timely, safe, high-quality nursing care on their respective units.

Project Purpose and Objectives

Evidence suggests that evaluating NTI and OC can help maintain a ready and capable team of skilled RNs; however, most healthcare organizations do not collect or analyze NTI and OC data and focus on staffing numbers and monetary incentives to get adequate nursing numbers. Research shows that RNs with higher OC tend to demonstrate lower NTI and stay in their profession, jobs, and HCO longer. In a local example of one 32-bed stroke unit at a large regional medical center in the Midwest, high staff RN attrition resulted in inadequate RN staffing and closed unit beds, delaying patients' access to timely care. Despite increasing staffing by 3.6 Full-Time RNs, the degree of NTI and OC among nurses working on the stroke unit remains unknown, potentially placing the unit at increased risk of closing beds and care access in the future. So, the purpose of this Quality Improvement Project is to provide new data to the RN

Leadership, hospital nurse administrators, and the healthcare executives who oversee RN staffing, with the primary aim of evaluating the relationship between NTI and OC through a systematic record review of staff RN questionnaire response data following a unit's recent increase in nursing staffing levels.

Objectives

The methods of this DNP proposal project are framed using the Plan-Do-Study-Act (PDSA) Quality Improvement Framework and the following project objectives:

1. Review and synthesize the evidence from the literature to select an evidence-based NTI and OC questionnaire.
2. Conduct a systematic record review of NTI/OC Questionnaire responses obtained following one 32-bed stroke unit's planned RN staffing changes.
3. Disseminate the final scholarly project (FSP) findings to project stakeholders with the HCO, Otterbein University Graduate Nursing Department faculty, and DNP student peers.

Project Design and Method

Quality Improvement Framework

The objectives above and the methods described below for the DNP project align with the Plan-Do-Study-Act framework for quality improvement, which will guide this project through completion. Plan-Do-Study-Act (PDSA) is a problem-solving approach used in Quality Improvement (QI) projects to test and implement changes in a controlled and iterative manner (Speroff & O'Connor, 2004). The PDSA QI framework makes up the methodology for this project, which is widely used in acute care hospital settings to improve patient outcomes, reduce costs, and enhance the quality of care (Institute for Healthcare Improvement [IHI], 2017). The PDSA QI framework involves four steps–Plan, Do, Study, and Act –repeated continuously until the desired outcome is achieved. The PDSA QI methodology is a continuous improvement

process that allows teams to rapidly test and refine changes until they reach the desired outcome; however, the reader should note that for the author's FSP and the proposed DNP project, only one PDSA cycle was completed, outlined below.

Plan. In the "Plan" stage of the PDSA cycle, the team identifies the problem, sets project goals, and develops a plan to test the changes. During this proposed project's "Plan" stage, the author and the DNP project team leader identified the problem of hospital staff RN turnover and developed an instrument (Appendix B) to provide new data that supports RN leaders at one HCO during a preplanned RN staffing change on one 32-bed stroke unit with historically high staff RN turnover. Next, a plan was developed to test the unit's RN staffing change (i.e., the NTI/OC Questionnaire; Appendix B).

Do. In the "Do" stage of the PDSA cycle, the team identifies the problem, sets goals, and develops a plan to test the changes. For this proposed project, the author intended to distribute and collect the NTI/OC Questionnaire to one 32-bed stroke unit's full-time staff RNs following a planned change by the hospital RN administrators to increase or improve the unit's RN staffing. The decision to use the PDSA QI framework was made to test the effectiveness of the hospital RN administrators' RN staffing change on a small scale and collect data to evaluate the effectiveness of the change (Appendix B).

Study. In the "Study" stage of the PDSA cycle, the team analyzes the data to determine if the change was successful and identifies areas for improvement. Since this project has not yet been implemented, no NTI/OC Questionnaire response data is available for analysis. However, evidence from the literature suggests that high RN turnover rates have significant economic and non-economic implications for HCOs, remaining RNs, and patients needing timely care and hospital services. The literature indicates that evaluating NTI and OC is one evidence-based strategy to implement on a small scale to predict hospital staff RN turnover and retention and decrease preventable turnover of experienced hospital staff RNs.

Act. In the "Act" stage of the PDSA cycle, the team implements the change on a larger scale and continues to monitor its impact. The PDSA cycle is a continuous improvement process that allows teams to rapidly test and refine changes until they achieve the desired outcome. It is widely used in healthcare settings to improve patient outcomes, reduce costs, and enhance the overall quality of care. Evaluating NTI and OC using the instrument developed for this project would, in the long term, ensure optimal outcomes for HCOs, remaining hospital staff RNs, and patients seeking timely access to quality nursing care and hospital services. Following the initial planning through act stages, each PDSA cycle will comprise RN response data collected from the NTI/OC questionnaire. The PDSA cycles will continue monthly until the desired or enough NTI/OC data is collected and analyzed to produce meaningful results.

Target Sample and Setting

The proposed project will take place in a stroke unit within a Comprehensive Stroke Center at a large,1,059-bed, accredited teaching hospital in the Midwest. The setting for the proposed evidence-based QI initiative is one 32-bed stroke unit. The project's sample consists of full-time staff RNs (n = 13) and travel RNs (contracted via staffing agency; n = 15) with a permanent assignment on the 32-bed stroke unit.

Project Measures and Instruments

The primary project aim is to evaluate NTI and OC following an RN staffing change on the 32-bed stroke unit, which was planned by hospital RN administrators prior to this project. The variables of interest for this project include (1) demographic information, (2) NTI information, and (3) OC information, which are significant to the project as they are indicators of hospital staff RN turnover and retention. The literature lacks robust evidence for instruments to measure hospital staff NTI and OC in the same questionnaire and to support the employer, HCO, or profession. Although NTI has been studied among hospital staff RNs for decades, most researchers assessed the outcome by adding one to two Likert-scaled type questions to another

survey distributed to practicing hospital RNs in the acute care hospital where the study was conducted solely for the researcher's purpose. The lack of comprehensive, high-quality questionnaires evaluating NTI and OC as outcomes within the same survey and among hospital staff RNs demonstrates the need for more research on this topic. Despite the abovementioned limitation, two scales have consistently shown high reliability and validity in previous organizational and human resources research to evaluate TI and OC. A more detailed discussion of NTI/OC data reliability will be provided in the proposal's NIT/OC Questionnaire section.

Demographic Data

The demographic survey information, which comprises six questions contained within the NTI/OC Questionnaire, will include pertinent demographic data, including the participant's age, professional background (i.e., education and licensure), years of nursing experience, and time employed on the 32-bed stroke unit.

Nursing Turnover Intention (NTI)

NTI is *a hospital staff RN's attitude and behavior towards voluntarily leaving their job [i.e., HCO] or profession*. NTI predicts an RN's decision to leave their job, HCO, or profession (Callado et al., 2023; Chan et al., 2012) and is a valid and reliable indicator of actual turnover in the hospital staff RN population (Barlow & Zangaro, 2010; Hinshaw et al., 1985). This evidence demonstrates the measure's potential to support RN leaders in maintaining a ready and capable team of RNs. Specific reliability and validity statistics are discussed in detail in this Report's NTI/OC Questionnaire section.

Organizational Commitment (OC)

OC is *the relationship of an individual RN to the HCO* and is a reliable indicator of future RN retention. The nine OC items come from the original Organizational Commitment Questionnaire (OCQ) of Mowday et al. (1979), available in a 15-item or 9-item format and validated with data from various organizations and job classifications. Studies consistently show

a strong positive relationship between OC and employee retention, as employees with higher OC tend to stay with the organization longer than those with lower OC. In addition, studies consistently show a negative relationship between OC and TI/actual turnover. This further evidence demonstrates the measure's potential to support RN leaders in maintaining a ready and capable team of RNs. Specific reliability and validity statistics are discussed in detail under this proposal's NTI/OC Questionnaire section.

NTI/OC Questionnaire

The NTI/OC Questionnaire consists of six essential nursing demographic items, ten (7-point Likert Scaled) TI Questions, nine (5-point Likert Scaled) OC Questions, and two open-ended questions (Appendix B). Questionnaire response findings will be analyzed and presented in aggregate form. Evidence describing the NTI/OC Questionnaire's wide use and reliability is detailed below. In the quantitative, observational, descriptive, and cross-sectional study by Callado et al. (2023), Pearson's Coefficient revealed the existence of a significant negative correlation between NTI and OC (referred to by Callado et al. as "intention to leave" and "commitment to the organization" [$r = -0.51$, $p < 0.01$]). This proposed DNP Project's data collection tool (i.e., the NTI/OC Questionnaire; Appendix B) comprises the two scales from the study by Callado et al. (2023) used in a sample of 297 primary care nurses.

The NTI items come from the original Anticipated Turnover Scale (ATS) of Hinshaw and Atwood (1985), a Likert-type scale with 12 items rated from 1 (*strongly disagree*) to 7 (*strongly agree*). The ATS has been widely used with high internal consistency, and a mean-weighted effect size of reliability across 12 studies resulted in a Cronbach's alpha of 0.89 (Barlow & Zangaro, 2010). After piloting the ATS on hospital staff RNs, de Sul and Lucas (2020) reduced the original 12-item ATS to 10 items, which improved the ATS scale's reliability for hospital staff RNs (and making up the ten items used in the NTI portion of the NTI/OC questionnaire). The NTI scale can achieve a maximum of 70 points and a minimum of 10 points

(with a higher score indicating higher turnover intention; de Sul & Lucas, 2020, p. 1480). Previous studies have demonstrated that the 10-item NTI scale is reliable in hospital staff RNs; one study resulted in a Cronbach's alpha of 0.94 (Hart, 2005). The Cronbach's alpha of the NTI scale indicates that it can reliably indicate future RN turnover and aligns with the proposed project's purpose.

The OC items come from the 9-item shortened version of the Organizational Commitment Questionnaire (OCQ), developed in 1979 by Mowday et al. and initially with 15 items. The OC portion of the NTI/OC Questionnaire is another Likert-type scale, with responses obtained on a 7-point Likert-type scale where the 9 items rated from 1 (*strongly disagree*) to 5 (*strongly agree*). Mowday et al. (1979) defined OC as "the relative strength of an individual's identification with and involvement in a particular organization" (p. 226). The OC scale portion of the NTI/OC Questionnaire assesses employee feelings, attitudes, and positive values related to an employee's organization and workplace. The total score should be summed up and divided by the number of items, with high scores corresponding to high levels of OC. Previous studies have demonstrated that the 9-item OC scale achieved high levels of reliability and high internal consistency; one study resulted in a Cronbach's alpha of 0.90 (Han et al., 2014), demonstrating that the scale can reliably indicate future RN retention and identify individuals committed to the organization. Hence, the 9-item OC scale fits this project's proposed purpose.

While not as widely studied among the proposed project's population (i.e., hospital staff RNs) as NTI, the evidence from the literature demonstrates that OC is a measure that can also provide insight for RN leaders to maintain a ready and capable nursing team. Although relationships are most robust for affective commitment items and employee retention, relationships exist between retention/turnover and the variables found for all three conceptualizations of commitment represented by the OC items and first described by Allen & Meyer in 1990 (see also Meyer & Allen, 1991). Wang (2017) concluded that the scores for the

three types of commitment assessed by the OC scale in this project's NTI/OC Questionnaire were as follows: affective commitment scored 0.788, indicating a solid emotional attachment to the organization; continued commitment scored 0.762, indicating a willingness to persist with the organization; normative commitment scored 0.7, indicating a sense of obligation to remain with the organization. Furthermore, the α coefficient of the retention scale, a measure of the scale's internal consistency, was found to be 0.714. This suggests that the retention scale is highly reliable, making it a valuable tool for measuring employee retention.

Implementation Plan

The project site's stroke unit nursing staff will be approached face-to-face, and project information will be presented via an IRB-approved oral script by one of the project team investigators (Appendix C). Only the student associate investigator will conduct all recruiting and face-to-face contact with potential participants to prevent undue influence during the consent process. Prospective nursing staff participants will also be informed that all data collected will be de-identified, confidential, and only disseminated in aggregate form. Subjects will be made aware that participation is voluntary and that they can withdraw from the project activities at any time without consequence. All potential subjects will be encouraged to ask questions and voice concerns regarding participation in the project. If the potential nurse participant agrees to participate after the project has been explained and time for questions has been provided, then informed consent forms will be provided to each prospective participant to complete (Appendix D). After enrollment, nursing participants will be seated in a private office space off the unit during a scheduled break on their shift. They will complete the NTI/OC Questionnaire (Appendix B).

Ethical Considerations / Protection of Human Subjects

The project team will submit a written proposal as part of an application to the Institutional Review Board (IRB) at Otterbein University. The Otterbein University IRB will

review the proposal and determine project approval. Upon completion of the review, it is expected that Otterbein IRB will provide an exemption letter since no project implementation is to occur as part of the project. The Otterbein IRB letter will be attached to the final report as Appendix E and kept as a record by the DNP project team leader (i.e., principal investigator) and DNP team members (i.e., associate investigators) as soon as it becomes available. Since this is a DNP proposal project, no names or unique participant identifiers will be requested, collected, or stored. All information collected for this project's RN needs assessment was fully de-identified and summarized in aggregate form by the author before disclosure to DNP project team members and for this report, eliminating the need to store de-identified data in a password-protected, secure spreadsheet during this proposed project. Only de-identified aggregate data will be shared within and outside of the project site via the dissemination of the author's DNP Final Scholarly Project Report and to Otterbein University, Department of Graduate Nursing Faculty, and DNP student peers during an academic poster presentation or partial fulfillment of the DNP degree requirements from Otterbein University.

Participation is voluntary and based on the availability of hospital staff RNs. If an RN agrees to participate, signed informed consent should be obtained (Appendix D) and kept on record by the team leader. Each staff RN participant will take no more than 15 minutes to complete the NTI/OC Questionnaire. No inducements should be offered to the hospital nursing staff RN participants, RN leaders/administrators, or other project stakeholders.

Project Timeline and Budget

Timeline

The Otterbein University's Institutional Review Board's process (IRB) will be completed in April 2024. After IRB's approval, the collection and analysis of the project's NTI/OC questionnaire response data will likely begin and end in April 2024. From April 2024, a final scholarly written report will be developed along with a poster for presentation in partial

fulfillment of the requirements for the Doctor of Nursing Practice degree for the student AIs of the Project Team. Lastly, by the end of April 2024, the project will be defended and presented to the Nursing Department faculty and students at Otterbein University in an open forum. Once the final written report is approved by the Project Team Leader and Reviewing Committee, the final report and poster will be submitted to the university for publishing between the end of April and May 2024.

Budget

The project team will fund the anticipated financial budget (Appendix F), which will not exceed $1,832. These funds will be mainly used for paper, printing fees (NTI/OC questionnaire forms), and transportation. The budget also accounts for the personal time of the principal and project team investigators. The time spent by the project's key investigators will consist of collecting and reviewing response data from the pre-and post-activity participant questionnaires (e.g., two to four hours per week), updating Project Team Leader (PTL) with information about progress of project (one to two hours per week), reaching out to key stakeholders (PTL, second and third readers) for new viewpoints and project support, outcome management and data analysis, and writing final scholarly report document (average of two hours per day). Time will be budgeted between the team leaders to ensure specified deadlines to complete all duties.

Data Analysis Plan

Data Collection

The data for the proposed project will be collected as described in the implementation plan of this proposal. The nursing response data obtained from the NTI/OC Questionnaire provides an opportunity to assess the project's outcomes of interest in a reliable and standardized manner. The data is to be collected by the project team investigator and will be placed into a secure, password-protected Excel spreadsheet for analysis. All collected data will be fully de-identified before storage into a password-protected, secure spreadsheet as previously described

and only accessible to the Project Team PI and AI's reviewing and conducting data analysis. All physical data will be locked in a secure, locked room in file drawers. The data will be reviewed and analyzed using descriptive and inferential statistical tests for variance. Only de-identified aggregate data will be shared within and outside the university's Nursing Department faculty. A final close-out report will also be provided to the university IRB to close out the project.

Data Analysis

Descriptive statistics will be used to analyze and summarize quantitative data. Descriptive statistics will also allow the project team to examine and provide a basic summary of sample demographics and information about nurse participants' intention to stay or leave their jobs/profession and degree of organizational commitment and attitudes in remaining at the healthcare institution of employment. Questionnaire response findings will be analyzed and presented during a Final Scholarly Report poster presentation to nursing program students and faculty and will not be shared outside of the academic setting. The anticipated project findings may offer valuable unit-specific insights for RN leaders in understanding their staff's intentions to stay in their jobs, with their HCOs, and in the nursing profession. All project findings, identified barriers, and recommendations will be presented to all key stakeholders and leaders.

Discussion of Project Findings, Identified Barriers, and Lessons Learned

Despite obtaining IRB approval, due to the sensitive nature of the data involved and the DNP program time constraints, the data collection and sharing between the university and the HCO was not feasible. The project team still contends that the proposed project site's nursing leaders and hospital RN administrators would benefit from the ideas and methods proposed for this project, as the research greatly supports the identification of preventable reasons for NTI and OC in areas with high turnover (Taylor-Clark et al., 2022), like the high nursing staff attrition described in the local stroke unit in this proposal. However, with that mentioned, there are some lessons to be learned from not being able to implement the proposed project that, with future

revisions to the overall proposed plan and strategies, may improve the project's future viability and implementation. One of those lessons learned would be to partner with the proposed project site's human resources department as a critical project stakeholder during the initial planning stage so that obtaining NTI and OC data will not be perceived by the HCO as an extra burden on staff nurses, unnecessary cost, or potentially damaging or undermining to the level and quality of care services provided and marketed by the healthcare institution. Also, the project team should consider the evaluation of the perceived attitudes and needs of nursing participants since this is a standard practice that healthcare personnel undertake, with no increased risks of harm or undue stress.

Conclusion

Even though data collection could not occur, the literature suggests that evaluating NTI and OC is one evidence-based strategy to implement toward a better understanding of hospital staff RN turnover and retention, ultimately decreasing preventable turnover of experienced hospital staff RNs. Nurses with higher OC tend to demonstrate lower NTI and stay in their profession, jobs, and HCO longer. In a 32-bed stroke unit at a large regional medical center in the Midwest, high staff RN attrition resulted in inadequate RN staffing and closed unit beds, delaying patients' access to timely care. Despite increasing staffing by 3.6 Full-Time RNs, the degree of NTI and OC among nurses working on the stroke unit remains unknown, potentially placing the unit at increased risk of closing beds and care access in the future. The ideas, methods, and evidence from the literature, as presented in the project proposal, contend that the incorporation of the NTI/OC Questionnaire may offer valuable unit-specific insights for RN leaders, helping them to understand better their staff's intentions to stay and commitment to their organization, which may ultimately help to maintain a ready and capable nursing team, and prevent avoidable nursing turnover and thereby ensure timely, high-quality access to care for patients seeking hospital services.

References

Aiken, L. H., Sloane, D. M., McHugh, M. D., Pogue, C. A., & Lasater, K. B. (2023). A repeated cross-sectional study of nurses immediately before and during the covid-19 pandemic: Implications for action. *Nursing Outlook*, *71*(1), 101903. https://doi.org/10.1016/j.outlook. 2022.11.007

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, *63*(1), 1–18. https://doi.org/10.1111/j.2044-8325.1990.tb00506.x

American Association of Colleges of Nursing. (2023, July). *Nursing workforce fact sheet*. AACN Nursing. https://www.aacnnursing.org/news-data/fact-sheets/nursing-workforce-fact-sheet

American Nurses Foundation. (2022, August 2). *Pulse on the nation's nurses survey series: 2022 workplace survey nurses not feeling heard, ongoing staffing and workplace issues contributing to unhealthy work environment* [PDF]. https://www.nursingworld.org/~4a209f/globalassets/covid19/anf-2022-workforce-written-report-final.pdf

Bae, S. (2022). Noneconomic and economic impacts of nurse turnover in hospitals: A systematic review. *International Nursing Review*, *69*(3), 392–404. https://doi.org/10.1111/inr.12769

Barlow, K. M., & Zangaro, G. A. (2010). Meta-analysis of the reliability and validity of the anticipated turnover scale across studies of registered nurses in the united states. *Journal of Nursing Management*, *18*(7), 862–873. https://doi.org/10.1111/j.1365-2834.2010.01171.x

Buchan, J., & Aiken, L. (2008). Solving nursing shortages: A common priority. *Journal of Clinical Nursing*, *17*(24), 3262–3268. https://doi.org/10.1111/j.1365-2702.2008.02636.x

Callado, A., Teixeira, G., & Lucas, P. (2023). Turnover intention and organizational commitment of primary healthcare nurses. *Healthcare*, *11*(4), 521. https://doi.org/10.3390/healthcare11040521

de Vries, N., Boone, A., Godderis, L., Bouman, J., Szemik, S., Matranga, D., & de Winter, P. (2023). The race to retain healthcare workers: A systematic review on factors that impact retention of nurses and physicians in hospitals. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, *60*, 004695802311593. https://doi.org/10.1177/00469580231159318

De Smet, A., Dowling, B., Mugayar-Baldocchi, M., & Schaninger, B. (September 8, 2021). *'Great attrition' or 'great attraction'? The choice is yours* [McKinsey Quarterly]. McKinsey. https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/great-attrition-or-great-attraction-the-choice-is-yours#/

de Sul, S., & Lucas, P. (2020). Translation and validation of the anticipated turnover scale for the portuguese cultural context. *Nursing Open, 7*(5), 1475–1481. https://doi.org/10.1002/nop2.521

Galanis, P., Moisoglou, I., Katsiroumpa, A., Vraka, I., Siskou, O., Konstantakopoulou, O., Meimeti, E., & Kaitelidou, D. (2023). Increased job burnout and reduced job satisfaction for nurses compared to other healthcare workers after the covid-19 pandemic. *Nursing Reports*, *13*(3), 1090–1100. https://doi.org/10.3390/nursrep13030095

Gilmartin, M. J. (2012). Thirty years of nursing turnover research. *Medical Care Research and Review*, *70*(1), 3–28. https://doi.org/10.1177/1077558712449056

Han, S., Han, J., An, Y., & Lim, S. (2014). Effects of role stress on nurses' turnover intentions: The mediating effects of organizational commitment and burnout. *Japan Journal of Nursing Science*, *12*(4), 287–296. https://doi.org/10.1111/jjns.12067

Hart, S. (2005). Hospital ethical climates and registered nurses' turnover intentions. *Journal of Nursing Scholarship*, *37*(2), 173–177. https://doi.org/10.1111/j.1547-5069.2005.00030.x

Hinshaw, A., Atwood, J. R., Gerber, R., & Erickson, J. (1985). Testing a theoretical model for job satisfaction and anticipated turnover of nursing staff. *Nursing Research*, *34*(6), 384. https://doi.org/10.1097/00006199-198511000-00028

Institute for Healthcare Improvement. (2017). *Quality improvement essentials toolkit* (PDSA Worksheet) [PDF]. ihi.org. https://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx

Lasater, K. B., Aiken, L. H., Sloane, D., French, R., Martin, B., Alexander, M., & McHugh, M. D. (2021). Patient outcomes and cost savings associated with hospital safe nurse staffing legislation: An observational study. *BMJ Open*, *11*(12), e052899. https://doi.org/10.1136/bmjopen-2021-052899

McElroy, A. (2023, May 2). *New data show enrollment declines in schools of nursing, raising concerns about the nation's nursing workforce*. AACN. https://www.aacnnursing.org/news-data/all-news/article/new-data-show-enrollment-declines-in-schools-of-nursing-raising-concerns-about-the-nations-nursing-workforce

McHugh, M. D., Aiken, L. H., Sloane, D. M., Windsor, C., Douglas, C., & Yates, P. (2021). Effects of nurse-to-patient ratio legislation on nurse staffing and patient mortality, readmissions, and length of stay: A prospective study in a panel of hospitals. *The Lancet*, *397*(10288), 1905–1913. https://doi.org/10.1016/s0140-6736(21)00768-6

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61–89. https://doi.org/10.1016/1053-4822(91)90011-z

Morioka, N., Ochi, M., Okubo, S., Moriwaki, M., Hayashida, K., Sakata, I., & Kashiwagi, M. (2023). Citation network analysis of nurse staffing research from the past two decades: 2000–2022. *Healthcare*, 11(23), 3050. https://doi.org/10.3390/healthcare11233050

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, *14*(2), 224–247. https://doi.org/10.1016/0001-8791(79)90072-1

National Cancer Institute. (n.d.). *NCI thesaurus term browser*. ncithesaurus.nci.nih.gov/. Retrieved January 24, 2024, from https://ncithesaurus.nci.nih.gov/ncitbrowser/ConceptReport.jsp?dictionary=NCI_Thesaurus&ns=ncit&code=C25725

National Council of State Boards of Nursing. (2023). The ncsbn 2023 environmental scan: Nursing at a crossroads—an opportunity for action. *Journal of Nursing Regulation*, *13*(4), S1–S48. https://doi.org/10.1016/s2155-8256(23)00006-6

NSI Nursing Solutions, Inc. (2023). *2023 nsi national health care retention & rn staffing report* [Report]. NSI. https://www.nsinursingsolutions.com/ Documents/Library/NSI_National_Health_Care_Retention_Report.pdf

Ohio Nurses Association. (2023). *The state of nursing in Ohio* (White Paper) [PDF]. ONA. https://ohnurses.org/wp-content/uploads/2023/09/ONA-White-Paper_092523.pdf

Pagilagan, H. (2017). *Factors that affect turnover intention of registered nurses in the acute hospital: A meta-analysis from 2006-2016* (Doctoral Projects. 71). California State University. https://doi.org/10.31979/etd.xxpf-skw3

Smiley, R. A., Allgeyer, R. L., Shobo, Y., Lyons, K. C., Letourneau, R., Zhong, E., Kaminski-Ozturk, N., & Alexander, M. (2023). The 2022 national nursing workforce survey. *Journal of Nursing Regulation*, *14*(1), S1–S90. https://doi.org/10.1016/s2155-8256(23)00047-9

Speroff, T., & O'Connor, G. T. (2004). Study designs for pdsa quality improvement research. *Quality Management in Health Care*, *13*(1), 17–32. https://doi.org/10.1097/00019514-200401000-00002

Taylor-Clark, T. M., Swiger, P. A., Anusiewicz, C. V., Loan, L. A., Olds, D. M., Breckenridge-Sproat, S. T., Raju, D., & Patrician, P. A. (2022). Identifying potentially preventable reasons nurses intend to leave a job. *JONA: The Journal of Nursing Administration*, *52*(2), 73–80. https://doi.org/10.1097/nna.0000000000001106

Wang, Y., Li, Z., Wang, Y., & Gao, F. (2017). Psychological contract and turnover intention: The mediating role of organizational commitment. *Journal of Human Resource and Sustainability Studies*, *5*, 21–35. https://doi.org/10.4236/jhrss.2017.51003

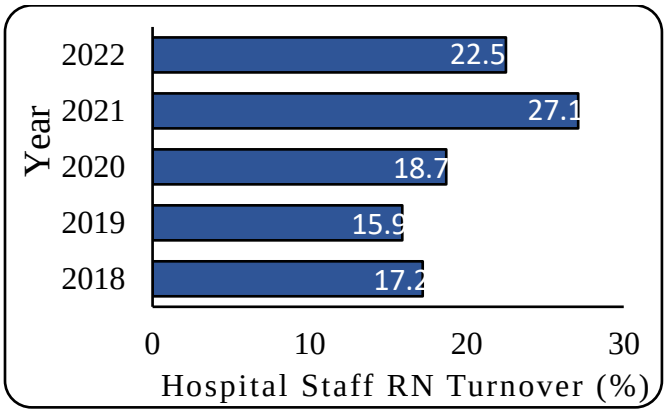
Zhu, L.-L., Wang, H.-J., Xu, Y.-F., Ma, S.-T., & Luo, Y.-Y. (2023). The effect of work engagement and perceived organizational support on turnover intention among nurses: A meta-analysis based on the price–mueller model. *Journal of Nursing Management*, *2023*, 1–14. https://doi.org/10.1155/2023/3356620

Appendix A

Hospital Turnover Rates & Stroke Unit's Nursing Workforce Data

Figure 1

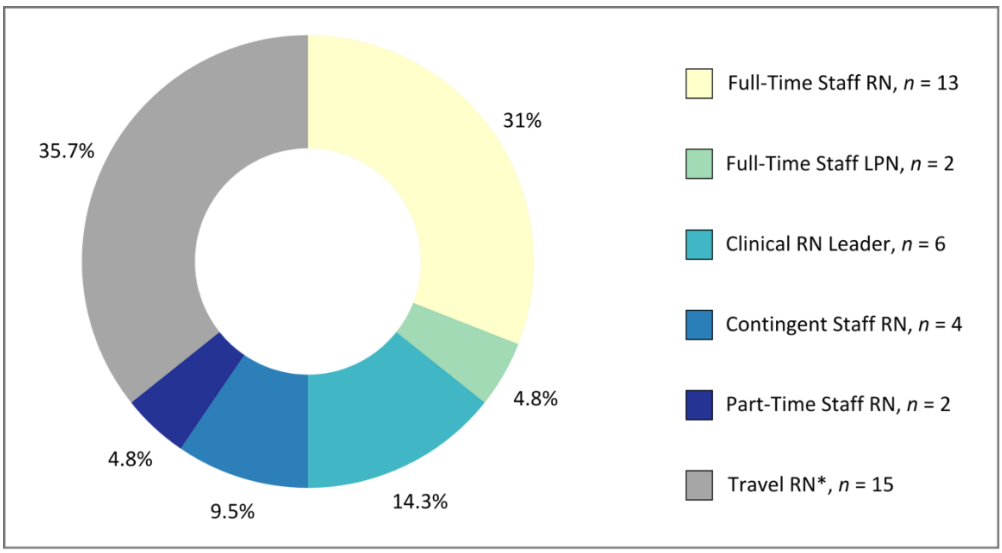
U.S. Hospital Staff RN Turnover, 2018-2022



Note. The bar chart represents hospital staff RN turnover based on survey response data analyzed and published in the *2023 NSI National Health Care Retention & RN Staffing Report*, which was

Figure 2

Stroke Unit's Nursing Workforce by Employment Type



Note. The author collected and analyzed the deidentified aggregate data in the doughnut chart during this project's "plan" stage and as part of the unit's RN needs assessment. The hospital RN

Appendix B

Nursing Turnover Intent and Organizational Commitment (NTI/OC) Questionnaire

Demographic Information Questions

Answer the questions below.

What is your age?
____18-29 yrs.
____30-34 yrs.
____35-39 yrs.
____40-44 yrs.
____45-49 yrs.
____50-54 yrs.
____55-59 yrs.
____60-64 yrs.

How many years have you been a nurse?
_____ <1 year
_____ 1-2 years
_____ 3-5 years
_____ >5 years

How many years have you been a nurse on this unit?
_____ <1 year
_____ 1-2 years
_____ 3-5 years
_____ >5 years

What is your highest level of Education achieved so far?
____Associate ____Bachelor's

What is your current nursing practice licensure type?
_____Licensed Practical Nurse (LPN)
_____Registered Nurse (RN)

What is your current employment status on the unit?
_____ Full-time staff
_____ Part-time staff
_____ Clinical Nurse Leader (CNL)
_____ Travel staff (with a permanent contracted assignment on the unit)
_____ Travel staff (with a temporary contracted assignment on the unit)

Intention to Turnover Scale Questions (De Sul & Lucas, 2020):

Answer the questions below using a seven-point Likert scale. Select the answer that best represents your thoughts.

1. I intend to stay at my current workplace for some time.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

2. I am pretty sure I will leave my workplace in the near future.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

3. Deciding to stay or leave my workplace is not a key issue for me at the moment.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

4. If I received another job offer tomorrow, I would seriously consider it.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

5. I have no intention of leaving my current workplace.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

6. I've been in this workplace as long as I wanted to.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

7. I'm sure I will be here for some time.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

8. I intend to keep my job in this organization for some time.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

9. I have serious doubts about whether or not I will actually stay in this organization.
   _____7: Strongly Agree
   _____6: Agree
   _____5: Somewhat Agree
   _____4: Neither Agree nor Disagree
   _____3: Somewhat Disagree
   _____2: Disagree
   _____1: Strongly Disagree

10. I plan to leave this workplace soon.
    _____7: Strongly Agree
    _____6: Agree
    _____5: Somewhat Agree
    _____4: Neither Agree nor Disagree
    _____3: Somewhat Disagree
    _____2: Disagree
    _____1: Strongly Disagree

Organizational Commitment Scale Questions (Gomes, 2007):

Answer the questions below using a five-point Likert scale. Select the answer that best represents your thoughts.

11. I am willing to make an effort beyond what is normal to help this organization succeed.

    _____5: Totally Agree
    _____4: Agree
    _____3: Neither Agree nor Disagree
    _____2: Disagree
    _____1: Totally Disagree

12. I tell my friends that this organization is a great place to work.

    _____5: Totally Agree
    _____4: Agree
    _____3: Neither Agree nor Disagree
    _____2: Disagree
    _____1: Totally Disagree

13. I am willing to accept almost any kind of assignment so that I can continue to work in this organization.

    _____5: Totally Agree
    _____4: Agree
    _____3: Neither Agree nor Disagree
    _____2: Disagree
    _____1: Totally Disagree

14. I find that my personal values and those of this organization are quite similar.

    _____5: Totally Agree
    _____4: Agree
    _____3: Neither Agree nor Disagree
    _____2: Disagree
    _____ 1: Totally Disagree

15. I am proud to tell others that I work in this organization.

_____5: Totally Agree

_____4: Agree

_____3: Neither Agree nor Disagree

_____2: Disagree

_____1: Totally Disagree

16. I feel inspired to do my best by the fact that I work in this organization.

_____5: Totally Agree

_____4: Agree

_____3: Neither Agree nor Disagree

_____2: Disagree

_____1: Totally Disagree

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IRB Approval Date: 04/03/2024
Version:1

Appendix C

Script for Project Solicitation

An Evidence-Based Quality Improvement Initiative: Evaluating Nurse's Intent to Stay and Organizational Commitment Following Unit Staffing Changes on a Comprehensive Stroke Unit

Project Investigator Solicitation Verbal Script

Principal Investigator: **Chai Sribanditmongkol, Ph.D., RN, IBCLC, CNS**
Associate Investigator: **Heather Tatusko Phiri, MSN, RN**

Solicitation Script: Face-to-Face:

Hello. My name is Heather Tatusko Phiri, and I am a student investigator in the Graduate Nursing Program at Otterbein University. Our project team is conducting an evidence-based, quality improvement project that will assess the current relationship between turnover intention and organizational commitment of nurses employed in a regional medical center's stroke unit monthly for up to four months following recent staffing changes.

This interest in this project stems from the following: RN turnover has risen significantly since the COVID-19 pandemic, with evidence suggesting nurses are overworked, overwhelmed, undervalued, and understaffed at dangerous levels throughout various inpatient hospital units across the United States. In the last quarter, one specialized inpatient stroke unit closed available beds and patient access to specialized stroke care due to needing more nurses than available to provide safe, effective, quality care for the 32 inpatient stroke beds on the unit. To accommodate patient care and reduce the risk of closing beds, the department and unit leaders increased nursing staff by adding 1 RN per 12-hour shift or 3.6 FTE RNs to the unit staff RN workforce. The leadership only intends to monitor nursing staff-to-patient ratios, patient census and acuity, and access to care (e.g., opened, occupied, and closed beds). Staff retention and turnover are important metrics in managing human resources and maintaining the current workforce.

The intention to leave or stay is a widely used and well-developed indicator of staff turnover. Research suggests that it is important to account for the nursing staff's intent to leave or stay to retain a ready and capable nursing team. Studies also demonstrate a significant positive relationship between turnover intent and organizational commitment, which are crucial to all healthcare organizations' mission goals. Since an individual's organizational commitment relates to their professional relationship with the organization of employment, it is also an

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Version:1

important outcome to measure when changes to staffing or the clinical setting occur. However, the leadership team is not currently assessing the nursing staff's intent to stay/leave or their organizational commitment, which may lead to future problems with nursing retention and impair access to safe, quality care for *patients staying in the stroke unit.*

Therefore, the purpose of this quality improvement project is to examine the relationship between turnover intention and organizational commitment of nurses employed in a regional medical center's stroke unit monthly for up to four months following recent staffing changes. The anticipated project findings can serve as a beginning point for a greater understanding of evidence-based practices and quality improvement approaches for nursing leaders and hospital administrators, who oversee, sustain, hire, and support nurses with the necessary resources to maintain adequate nursing-to-patient staffing ratios and safe, quality access to care for the acute stroke patient population. We invite you to participate in this project if you have an interest in helping the project investigators and the healthcare leadership teams with nursing staff retention, organizational commitment, and job satisfaction and if you meet the qualifying criteria, as will be described shortly.

Do you have any questions before I continue?

[Answer questions as appropriate.]

If you decide to participate in this project, your total time commitment will be approximately 10-15 minutes, as follows:

***Participation is voluntary and based on your availability to attend a brief, one-time Nursing Turnover Intent and Organizational Commitment Questionnaire, which consists of basic participant demographic information questions, ten (7-point Likert Scaled) Turnover Intent Questions, nine (5-point Likert Scaled) Organizational Commitment Questions, and two open-ended questions. The questionnaire should be no longer than 10-15 minutes for you to complete*.**

Do you have any questions before I continue?

[Answer questions as appropriate.]

To be able to participate in the project, you must meet the following criteria:

1) ***Equal to or greater than 18 years of age;***
2) ***Active Registered Nurse (RN) License;***
3) ***Part-time or full-time nursing staff currently employed on the specialized inpatient stroke care unit; and***
4) ***Able to read and speak English.***

IRB Protocol Number: HS # 23/24-50
IRB Approval Date: 04/03/2024
Version:1

There are no risks or direct benefits to you, as a participant. However, the findings of this scholarly project are anticipated to help serve as a beginning point for a greater understanding of evidence-based practices and quality improvement approaches for nursing leaders and hospital administrators, who oversee, sustain, hire, and support nurses with the necessary resources to maintain adequate nursing-to-patient staffing ratios and safe, quality access to care for the acute stroke patient population.

Individuals participating in this project will not receive any inducements or monetary gift incentives.

Information collected for this project's purposes will be de-identified and kept confidential. Your name will not be on the collected materials; only a study number will be.

Please note that your participation in the study is entirely voluntary. Also, if you decide to participate, you can withdraw from the project without penalty at any time.

Do you have any questions at this time?

[Answer questions as appropriate.]
[If the Respondent is eligible and wants to participate, consent will be completed.]

[If Respondent is eligible but does not want to participate, state the following]:
***Thank you for your time**.*

[If Respondent wants to participate but is not eligible, state the following].
I am sorry, but the protocol does not allow us to include you in the project. Thank you very much for your time. If you have any questions, please phone Heather Tatusko Phiri at (614) 579-6173 (heather.tatusko@otterbein.edu) and/or Dr. Chai Sribanditmongkol at (614) 823-1678 (sribanditmongkol1@otterebin.edu).

Appendix D

Project Consent

Otterbein University Consent to Participate in Projects/Research

Project/Study Title:	**Evaluating Stroke Unit Nurses' Turnover Intention and Organizational Commitment Following Staffing Changes: An Evidence-based Quality Initiative**
Principal Investigator (Faculty/Advisor):	**Chai Sribanditmongkol, Ph.D., RN, IBCLC, CNS**
Associate Investigator (Student):	**Heather Tatusko Phiri, MSN, RN**

- **This is a consent form for research participation.** It contains important information about this project and what to expect if you decide to participate. Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether or not to participate.
- **Your participation is voluntary.** You may refuse to participate in this study. If you decide to take part in the study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you, and your employment status or standing within your healthcare facility. Your decision will not affect your future relationship with Otterbein University.
- **You may or may not benefit as a result of participating in this project.** There are no risks or direct benefits to you as a participant.
- **You will be provided with any new information that develops during the project that may affect your decision whether to continue participating.** If you decide to participate, you will be asked to sign this form and will receive a copy of the form. You are being asked to consider participating in this project for the reasons explained below.

1. Why is this project being done?

The focus of this evidence-based, quality improvement project is to assess the current relationship between turnover intention and organizational commitment of nurses employed in a regional medical center's stroke unit monthly for up to four months following recent staffing changes.

2. How many people will take part in this study?

Up to 70 Registered Nurses will participate.

3. What will happen if I take part in this project?

If you take part in this project, your total time commitment will be approximately 10-15 minutes. Participation is voluntary and based on your availability to attend a brief, one-time Nursing Turnover Intent and Organizational Commitment Questionnaire, which consists of basic participant demographic information questions, ten (7-point Likert Scaled) Turnover Intent Questions, nine (5-point Likert Scaled) Organizational Commitment Questions, and two open-ended questions. The questionnaire should be no longer than 10-15 minutes for you to complete.

4. How long will I be in the project?

The total participant time commitment for this project will be approximately 10-15 minutes.

5. Can I stop being in the project?

You may leave the project at any time. If you decide to stop participating in the project, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with Otterbein University or your employment status with your healthcare facility.

6. What risks, side effects, or discomforts can I expect from being in the project?

There are no physical or psychological risks to you as a student participant. The only identified minimal risk of this project could be the loss/breach of your responses obtained via the questionnaire. Information collected for this project's purposes will be de-identified and kept confidential. Your name will not be on the collected materials, only a project number, so there is no more risk to you than there is for any employee participating in quality improvement projects, staffing, job satisfaction, or human resources questionnaires. Therefore, there is minimal to no risk to you as a participant in this project.

7. What benefits can I expect from being in the project?

You will not benefit directly from participating in the project. However, the findings of this scholarly project are anticipated to serve as a beginning point for a greater understanding of evidence-based practices and quality improvement approaches for nursing leaders and hospital administrators, who oversee, sustain, hire, and support nurses with the necessary resources to maintain adequate nursing-to-patient staffing ratios and safe, quality access to care for the acute stroke patient population.

8. What other choices do I have if I do not take part in the project?

You may choose not to participate without penalty or loss of benefits to which you are otherwise entitled.

9. Will my project-related information be kept confidential?

Efforts will be made to keep your study-related information confidential as previously described. However, there may be circumstances where this information must be released. For example, personal information (demographic and questionnaire responses) regarding your participation in this project may be disclosed if required by state and federal laws.

Also, your records may be reviewed by the following groups (as applicable to the research):

- Office for Human Research Protections or other federal, state, or international regulatory agencies;
- Otterbein University Institutional Review Board or Office of Responsible Research Practices; and
- The faculty PI/ Advisor supporting the project, their agents, or project/study monitors.

10. What are the costs of taking part in this study?

There is no cost to participate in this study.

11. Will I be paid for taking part in this study?

By law, payments to subjects are considered taxable income. Individuals participating in this project will not receive any inducements or any monetary gift incentives.

12. What happens if I am injured because I took part in this study?

If you suffer an injury from participating in this project, you should notify and seek medical care from your healthcare provider. Should you obtain medical treatment with your healthcare provider or medical facility/university health center, the cost for this treatment will be billed to you or your medical plan or hospital insurance. Otterbein University has no funds set aside for the payment of health care expenses for participating in this project.

13. What are my rights if I take part in this study?

If you choose to participate in the project, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights you may have as a participant in this project.

You will be provided with any new information that develops during the project that may affect your decision whether or not to continue participating in the study.

You may refuse to participate in this project without penalty or loss of benefits to which you are otherwise entitled.

An Institutional Review Board responsible for human subjects research at Otterbein University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in scholarly projects/research.

14. Who can answer my questions about the study?

For questions, concerns, or complaints about the project, you may contact Heather Tatusko Phiri at (614) 579-6173 (heather.tatusko@otterbein.edu) and/or Dr. Chai Sribanditmongkol at (614) 823-1678 (sribanditmongkol1@otterbein.edu).

For questions about your rights as a participant in this project or to discuss other project/study-related concerns or complaints with someone who is not part of the project team, you may contact Dr. Noam Shpancer, IRB Chair, at IRB@otterbein.edu.

If you are injured as a result of participating in this study or for questions about a project-related injury, you may contact Heather Tatusko Phiri at (614) 579-6173 and/or Dr. Chai Sribanditmongkol at (614) 823-1678.

Signing the consent form

I have read (or someone has read to me) this form, and I am aware that I am being asked to participate in an evidence-based practice quality improvement project. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this project.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

Printed name of the participant/ subject	**Signature of participant/ subject**
	Date and time **AM/PM**
Printed name of the person authorized to consent for the participant/ subject (when applicable)	**Signature of the person authorized to consent for the participant/ subject (when applicable)**

		AM/PM
Relationship to the participant/ subject	**Date and time**	

Investigator/Research Staff

I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

Heather Tatusko Phiri, MSN, RN		
Printed name of person obtaining consent	**Signature of the person obtaining consent**	
		AM/PM
	Date and time	

Witness(es) - *May be left blank if not required by the IRB*

Dr. Chai Sribanditmongkol, Ph.D., RN, IBCLC, CNS		
Printed name of the witness	**Signature of witness**	
		AM/PM
	Date and time	
Printed name of the witness	**Signature of witness**	
		AM/PM
	Date and time	

Appendix E

Otterbein University IRB Determination Letter

OTTERBEIN UNIVERSITY

INSTITUTIONAL REVIEW BOARD

☒ Original Review
☐ Continuing Review
☐ Amendment

Dear Dr.Sribanditmongkol,

With regard to the employment of human subjects in the proposed research:

HS # 23/24-50
Sribanditmongkol & Tatusko; Evaluating Nurses' Turnover Intention and Organizational Commitment Following Stroke Unit Staffing Changes: An Evidence-based Quality Initiative.

THE INSTITUTIONAL REVIEW BOARD HAS TAKEN THE FOLLOWING ACTION:

☒ Approved
☐ Approved with Stipulations*
☒ Limited/Exempt/Expedited Review
☐ Disapproved
☐ Waiver of Written Consent Granted
☐ Deferred

*Once stipulations stated by the IRB have been met by the investigator, then the protocol is APPROVED.

1. As Principal Investigator, you are responsible for ensuring all individuals assisting in the conduct of the study are informed of their obligations for following the IRB-approved protocol.
2. It is the responsibility of the Principal Investigator to retain a copy of each signed consent form for at least four (4) years beyond the termination of the subject's participation in the proposed activity. Should the Principal Investigator leave the university, signed consent forms are to be transferred to the IRB for the required retention period.
3. If this was a limited, exempt, or expedited review, there is no need for continuing review unless the investigator makes changes to the proposed research.
4. If this application was approved via full IRB committee review, the approval period is one (1) year, after which time continuing review will be required.
5. You are reminded you must promptly report any problems to the IRB and no procedural changes may be made without prior review and approval. You are also reminded the identity of the research participants must be kept confidential.

Signed: Meredith Meyer Date: 4-03-2024
IRB Chairperson

Appendix F

Proposed Budget

Expense	Cost
Principal investigation time for introduction	10 minutes = $10
Transportation	20 miles per drive to Otterbein University. 2 round trips = 80 miles Gas price per gallon $3.55 80 miles = $9.47
Principal investigator's time for distributing NTI/OC questionnaires, data collection, and response data analysis	60 minutes = $90 $90 x # 20 hrs. spent = $1800
Paper cost	15 * 2 = 30 30 * $0.10 = $3
Ink cost	$0.68 for each paper $0.68*30 papers= $20.4
Total Cost	$1,832.87