DEVELOPMENT OF AN ACUITY SCALE FOR THE INPATIENT HOSPICE SETTING, A QUALITY IMPROVEMTENT PROJECT

by

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A scholarly project submitted in partial fulfillment
of the requirements for the degree

of

Doctor of Nursing Practice

in

Family Medicine

MONTANA STATE UNIVERSITY
Bozeman, Montana

May 2023

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ABSTRACT

Background: Nurse burnout and care fatigue are troubling, prevalent issue within our medical community. Research has shown that high acuity and inequitable staffing assignments contribute to the problem. No streamline solutions have been proposed in the literature. Patient safety events such as falls, and medication errors have been shown to be interrelated to nurse burnout. Balancing workload and patient demands are essential in promoting safe care environments. A 21-bed hospice unit in North Idaho recognized this correlation and requested help in developing an acuity scale to promote nurse to patient staffing equitability thus lessening care burden. **Method:** A literature review reviled numerous articles promoting staffing balance to stave off care fatigue. Acuity scales are an efficient, concise way to quantify workload and promote balanced staffing assignments. Staff surveys were conducted prior to and post implementation of the tool to measure staff assignment satisfaction. Data was collected on fall rates and medication errors to detect correlation between the two factors. **Intervention:** Only one published hospice specific acuity scale was identified in the literature review done for this project, Mary Potter Hospice Acuity Tool. A unit specific tool was developed based of the framework provided by this published scale. The acuity tool was trialed on fifty new admissions into the hospice unit between February and March 2023. **Results:** Limited data was collected as the implementation phase of the project was delayed due to IRB approval and facility specific setbacks. The marginal data collected demonstrates nurse assignment satisfaction improved post intervention while fall rates and medication errors actually increased. **Conclusion:** This projects objectives were not fully realized due to the previously mentioned delays. The data collected was minimal and greatly impacted. This project provides a solid framework for future developments in unit specific acuity tool development. Future projects such as this one would benefit from a larger timeframe in which to revise the tool being developed and facilitate better impact on the metrics being studied.

CHAPTER ONE

NURSE BURNOUT IN RELATION TO WORKLOAD, A LITERATURE REVIEW

Abstract

Background: High workloads and patient acuity burdens have been linked to increased levels of nurse job dissatisfaction and burnout. Although this is discussed extensively in the literature, no streamlined solutions have been proposed. Balancing patient acuity and nurse staffing assignments is imperative to job satisfaction, nurse retention, and patient safety.

Objectives: The objective of this review and doctoral quality improvement project (QIP) is to help fill the gap in the literature and practice regarding patient-based acuity staffing standards, particularly in relation to hospice care.

Data sources: Databases searched for this review included - CINAHL complete, PubMed, JBI, UpToDate, Cochrane, and Medline.

Conclusions: This review noted a high correlation between nurse job satisfaction and defining patient acuity. Also important were being mindful of geographical room location and continuity of care. Patient acuity in the hospice setting could be an effective approach to improving staff satisfaction and ultimately patient safety.

Implications for practice: Implementation of facility specific acuity scale development and nurse involvement in acuity level assignments can positively impact nurse job satisfaction as well as patient safety.

Keywords: patient based acuity, acuity, hospice, inpatient, patient safety, nurse job satisfaction

Significance, problem, & literature review

Nurse burnout is troubling problem that plagues the nursing workforce. Numerous studies and systematic reviews have pointed to heavy workloads as being one of the biggest contributing factors to nursing exhaustion and care fatigue (Maceri et al, 2019). The term workload in the nursing field does not have a clear definition. Instead, it carries a general idea of what takes place throughout a nurse's workday. Workload is described by Hummel et al as being "a measure of a relationship of the number of resources demanded by a task situation" (2020). Thus, attention to defining daily work demands will help quantify the nurse's workload. Using patient base acuity scales helps place numeric value on the day-to-day care needs of each individual patient.

Background and Significance

Patients in specialty units, such as hospice, have unique needs that are often not reflected in traditional acuity scales. Things like administering medications and assisting with daily care regimens are only a small piece of the whole care spectrum. Psychological factors, memory issues, complex pain management, and family dynamics are part of the morass of the hospice patients care plan. The hospice patient carries many distinct aspects of nursing cares that are not included in the basic conceptualization of what is nursing care.

Hospice patients in general have drawn very little attention in the literature, especially in consideration of the nurse's daily work experience. The idea of defining a hospice patient's complex care needs on an acuity index has not been researched. The literature search conducted for this project exhausted numerous databases and resulted in only one published hospice specific acuity tool (Mary Potter Hospice, 2014).

Literature review

Methods

Databases searched for this review included CINAHL complete, PubMed, JBI, UpToDate, Cochrane, and Medline. Of 3643 search results 81 full texts were reviewed, 12 were considered relevant to this project. Keywords used in the searches were patient-based acuity, acuity, hospice, inpatient, patient safety, and nurse job satisfaction. Different combinations of these words were searched. Eligibility was determined on relevance to the project (hospice specific, nurse experience, and acuity scales). All relevant studies were included. Articles searched were from 2014 through 2022. A wide date range was justified as there were limited amounts of relevant studies within the last five years. No geographical limit was placed.

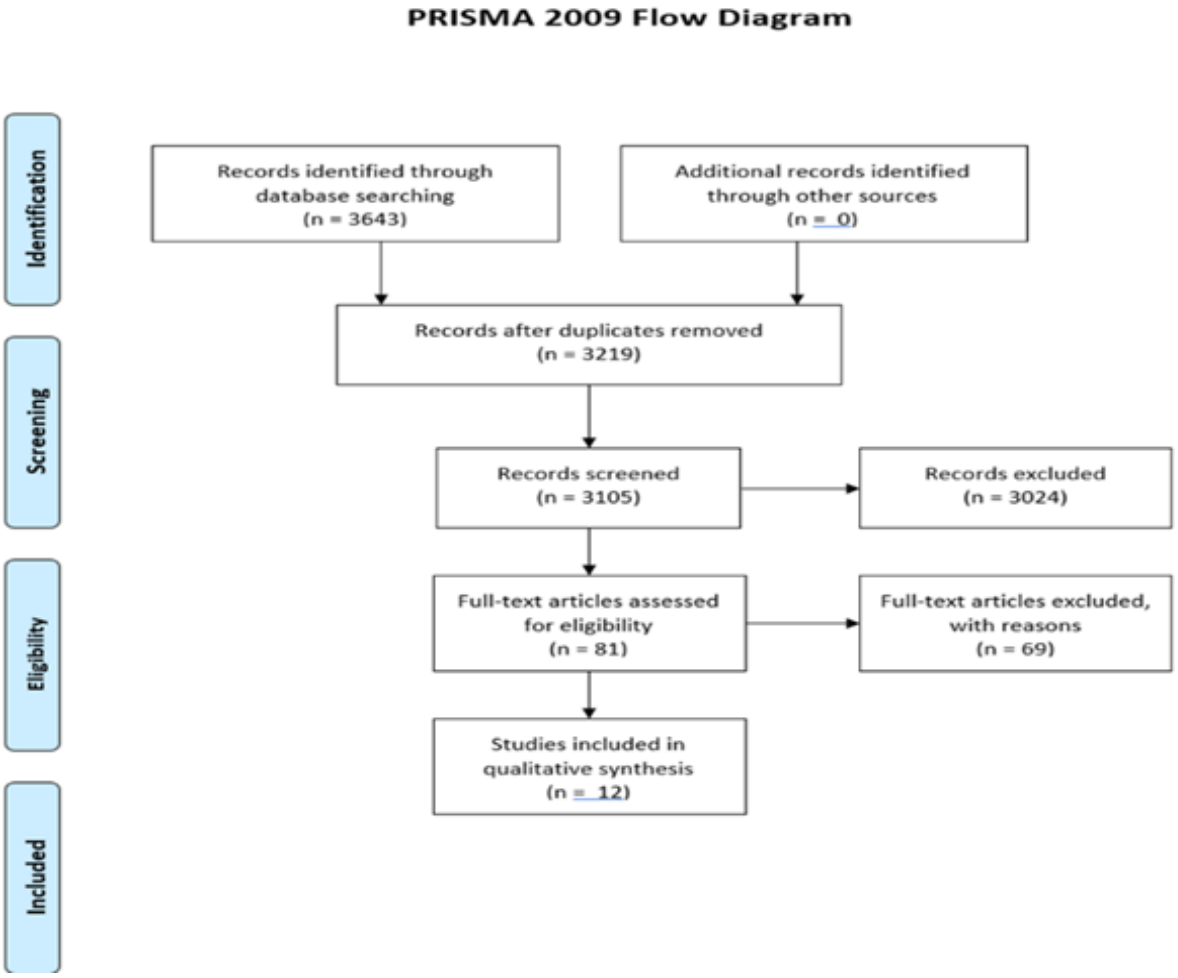

Figure 1: PRISMA Diagram

Results

An examination of the literature revealed a relationship between nurse workload and high rates of burn out. Many articles advocate for additional research to determine causation between nurse-to-patient work assignment equitability and poor patient outcomes. Acar and Butt (2016) denote this concept by saying "nurse patient assignments have received very little attention…even though they have a direct and immediate impact on nurses' activities during a

shift" and go on to discuss the negative impacts on patient care. Also noted in the literature, was an emphasis on developing unit and patient specific acuity scales to help evenly distribute workload thus decreasing burnout levels and poor patient outcomes.

The Clinical Problem

The Use of Acuity Scales in the Nursing Workplace

Use of a patient-based acuity (PBA) scale is key in allocating nurse resources in a way that would be most beneficial to the institution and the patients. PBA scale assigns a numerical value to the patient workload and helps the charge nurse determine an equitable patient assignment to each nurse on duty, while considering patient geographical location and nurse skill mix. The Joanna Briggs Institute (JBI) recommends developing patient-based acuity ratings specific to the institution and the patients being cared for within that institution. This increases specificity to patient care needs and compliance from the nursing staff (Ndegwa, 2022). Ndegwa (2022) emphasized the importance of the utilization of a specific PBA stating, "measuring and controlling patient acuity is essential in the provision of competent patient care".

Best practice to address the problem

No PBA scales were identified that are specific to hospice care. The application of PBAs in other settings was used as a foundation to identify the best practice to address the problem. Best practice for the problem at hand is two-pronged. To promote nurse staffing equity, job satisfaction, and improved patient safety a PBA tool must be developed specific to the hospice population. In addition to the development of the population and unit specific tool education with the nurses using the tool must occur. JBI evidence summaries were utilized to systematically

identify best practice recommendations. The acuity scale development process must take into consideration the importance of the nurses in the hospice unit being involved in the development of the tool.

Best practice recommendations proposed by Ombech (2021) for education include formalizing an education structure and empowering the charge nurse to participate in decision-making activities, specifically being involved in the development of the tool they will be using. Ombech (2021) also reports recommendations regarding assigning a staff educator and identified four barriers to the education process: engagement, staffing, lack of resources, and lack of communication. Being mindful of these barriers will help promote proper and effective discussion and education on the new tool.

As mentioned previously, it is imperative that the PBA be institution and patient population specific. Best practice recommendations also include nurse involvement and input on the development of the tool. Nurses should also be made aware of the modifications to practice prior to implementation of those changes. Assessments of the change's impact should be documented and discussed by key stakeholders. Education on the content of the acuity scales should be provided to all nursing staff. In addition to the acuity assignments, geographical room location and continuity of care should be considered when deciding the nurse/patient assignment (Ndegwa, 2022).

Practice and Policy Implications

This project directly aligns with President Biden's recent proposal for reform changes (February 2022), to improve nursing home and inpatient eldercare staffing guidelines (Karikari-Martin and Ingram, 2022). Karikari-Martin and Ingram (2022) reports that Medicare-Medicaid

certified inpatient homes are federal mandates to provide 24 hours of nursing services that are "sufficient to meet nursing needs of [their] residents". This mandate fails to define the term "sufficient" leaving room for interpretation by the facilities housing these residents. Assaye et al (2021) discuss the importance of organizing staffing effectively to promote patient safety and nurse job satisfaction, keeping in mind nursing skill mix and workload burden. Staffing ratios must not only focus on the numeric patient to nurse relationship, but also patient care burden.

As discussed previously, nursing assignments are key when it comes to patient care and safety. Resounding evidence is presented in the literature relating patient safety concerns and nurse burnout to high patient to nurse ratios (Assaye et al, 2021) and heavy workloads (Lehman and Harris, 2020). According to a JBI 2021 evidence summary, data confirmed that heavy nurse workloads as well as higher acuity levels contributed to medications errors (Moola). Developing a hospice specific PBA tool could potentially lead to decreased fall rates, medication errors, and overall nurse burnout.

Conclusion

PBA scales can be described as a numeric value assigned to individual patients based off the projected complex healthcare needs and nursing care plan. This is a fluid number that can be reassessed and reassigned at any time throughout their care continuum. PBA has been associated with positive clinical results and improved outcomes (Lehman and Harris, 2020). A correlation in the literature linking use of PBAs for staffing assignments with job satisfaction and patient safety is evident. There is, however, very little research done on this topic. It is imperative that more research be done in this field to substantiate the interconnection. The nursing field is in a state of

flux in the current healthcare climate. Tools must be developed with nurse job satisfaction and nurse retention in mind to ensure and promote patient safety.

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CHAPTER TWO

DEVELOPING AN ACUITY TOOL FOR THE INPATIENT HOSPICE SETTING, A QUALITY IMPROVEMENT PROJECT

Introduction to the Problem

The Center for Medicare and Medicaid services (CMS) has identified key patient safety concerns affecting the medical community in the United States. Of these concerns patient falls, and medication errors are considered "never evens" meaning they should never happen (CMS, 2008). Unfortunately, such events do happen. A crucial measure in patient safety is to identify standardized approaches in the care design to achieve this "never" goal.

The in-patient hospice setting is no exception to these patient safety concerns. In fact, these settings can pose more barriers and complications to patient safety due to the complexity of the patients and the related multifaceted treatment plans. The primary goal of any health care institution is to provide safe, sustainable care for the patients being treated within that system. One of the main threats to patient safety that has been identified in the literature is inadequate nurse staffing and high workload burdens (Lehman, 2020). Lehman (2020) goes on to say that a primary way to combat this stress is to establish equitable staffing assignments within the inpatient setting via the use of a patient acuity rating scale.

Problem Statement

The need for a manageable nurse to patient staffing ratios are a resounding theme in the literature and directly correlates to patient safety concerns. Yet, achieving manageable ratio are elusive in many health settings. Patient based acuity (PBA) assignments are a streamlined way of

achieving a balanced staff assignment. This acuity scale must be patient population and institution specific (Ndegwa, 2022). Ndegwa describes patient acuity as “the categorization of patients according to an assessment of their nursing care requirements. (2022). Ndegwa goes on to emphasize the importance of utilizing PBA by saying “measuring and controlling patient acuity is essential in the provision of competent patient care” (2022).

A 21-bed in-patient hospice unit in Idaho voiced a need for a unit and population specific acuity tool to help with nurse staffing assignment equitability. At the start of this project the facility utilized a 3-level sorting system which grouped patients into assumed care levels: general inpatient care, inpatient respite, or routine home care. However, this sorting system fails to capture the complex care needs of their admitted patient thus leading to unequal staffing assignments. Geographical room location (see table 2) is utilized to help with the assignments as well as consideration for skill mix but dissatisfaction is still felt and heard within this unit.

Organizational Microsystem Assessment

The current patient assignment process for this unit is based on geographical room location and continuity of care. As important as these two sorting criteria are the lack of acuity indexing has led to unsatisfactory nursing assignments. A needs assessment questionnaire was delivered to the 18 nurses on this unit (12 registered nurses, and 6 licensed practical nurses), including two full-time and 1 part-time charge RNs who identified some discontentment in current nurse distribution practices. Nearly 38% of nurses polled reported being “neutral” (on a Likert scale from extremely satisfied to extremely dissatisfied), 7% reported dissatisfaction while the other 57% reported being satisfied or extremely satisfied. In response to the question: what

percent of the time do you feel your assignments are equitable, only 41.67% reported feeling assignments were distributed fairly.

This hospice facility reported patient safety concerns revealing that from January to June of 2022 this unit experienced 9 reported falls and 6 identified medication errors. Assaye et al (2021) described in a systematic review of the impact of nurse staffing on patient and nurse outcomes that there is statistically significant evidence that higher acuity staffing assignments contribute to nurse burnout which in turn negatively impacts patient safety. These safety issues include medication errors, falls, and even mortalities.

Rationale

Nurse staffing is a direct way to influence both patient and nurse outcomes (Assaye et al, 2021). Patient safety can be improved as can nurse burnout rate by simply organizing workload in an equitable manner. A survey of staff at this 21-bed inpatient hospice unit found that only 41% of the nursing staff reported their assignments were distributed equitably, while 37% reported neutrality when in the context of patient assignment satisfaction. Many factors affect nurse assignment satisfaction including room location, skill mix, and acuity.

Utilizing the 5 Whys root cause analysis tool this student set out to define best care practices and evidence to support the need for a hospice specific patient-based acuity index and develop a tool for a local 21-bed in-patient hospice unit. This in-patient hospice unit participated in this quality improvement project (QIP) to increase nurse satisfaction and improve medication error and fall rates. Acar and Butt (2016) report that although geographical room location and skill mix are important considerations when assigning nurses to patients, charge nurses rated acuity as being 5 times more important.

Specific Aims

A collaborative hospice specific patient-based acuity scale has been developed and will continue to be improved upon based on stakeholder feedback. The final acuity tool will be implemented in 2023. The goal of this project is to improve patient safety, evidenced by decreased fall rates and medication errors within the first and second quarters of 2023. A follow up survey will also be conducted in 2023. It is assumed this survey will demonstrate improvements in staff assignment and job satisfaction. SMART goals have been set and will be utilized to guide this project and its outcomes.

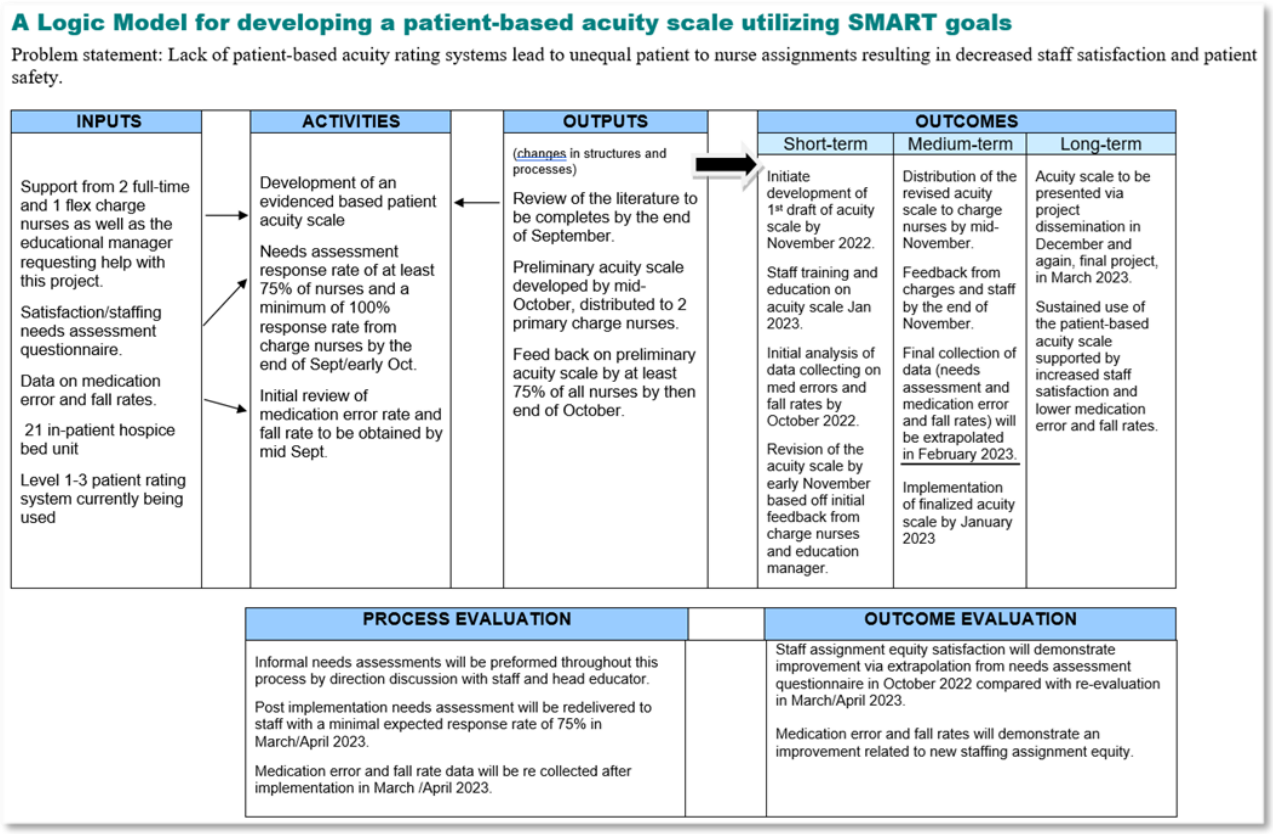

Figure 2. Logic Model

Context

The author of this work approached this hospice unit to seek guidance on a quality improvement project that would potentially benefit not only their unit but the hospice patient population in general. This is an under-served and under-represented population and the author thought it important to focus on this population. After some discussion and interview with the unit's educational director, a request was made to focus on the development of a patient-based acuity scale with a goal of more equitable staffing to help promote patient safety and staff satisfaction. Conversation then took place with the primary stakeholders on the development of the tool. Consideration was placed on their specific suggestions, wants, and goals for the final tool. Historically used tools were presented to this writer and discussion was had as to why these previously used tools had failed in practice. Interest and positivity were voiced by the stakeholders regarding this project and its outcome goals.

Intervention

A seven item, four-level patient-based, hospice specific, acuity tool based on specified patient needs and nurse feedback was created for this project. Scoring ranges from seven to twenty-eight, twenty-eight being the highest level of care needs. An appointed score of A1, A2, A3, or A4 will be allocated to each patient to facilitate equitable nursing assignments. This tool aligns with the only known published acuity tool specific to the hospice population (Mary Potter Hospice, 2014) The initial tool was built and distributed to staff nurses as well as charge nurses for feedback in October 2022. Changes to the tool were made based off this feedback. This approach was employed based off Joanna Briggs Institute (JBI) best practice recommendations

encouraging stakeholder input to achieve staff satisfaction and acceptance of the change being delivered (Ndegwa, 2022 and Ombech, 2021). Revisions were made to the tool and redistributed to the staff in November 2022 to gain additional feedback. The tool is anticipated to be utilized for every patient on the unit by the end of December 2023.

This tool is anticipated to not only help this facility manage their nurse-to-patient assignments but to promote staff satisfaction and a decrease in both patient fall rates and medication errors. Assaye et al (2021) highlights the importance of projects such as this one by discussing the lack of evidence promoting structured nurse staffing assignments, and workforce and patient outcomes. Understanding the impacts of nursing staffing and workload is key in mitigating adverse patient outcomes (Moola, 2022).

Hospice Acuity Tool

Categories:	1	2	3	4	Score
Medication/symptom management	Q4H PO meds Occasional PO PRN meds	Q4H meds Frequent PO PRN meds	Routine PO and IV meds Frequent PO/IV PRN's Refusing meds	Pain pump Crisis level pain/medication management needs Frequent IV PRN's	
ADL's	Independent (with or without family support)	Regular toileting assistance Set up (only) required for ADL's Bedbound	1 staff bathroom assistance Cath/ostomy in place Simple bowel management needs Family assist with feeding	2 staff bathroom assistance Complex bowel management needs Enteral feeding	
Cognition	Alert and oriented	Pleasantly confused Redirectable	Confused, restless, or agitated Changes in mental status Delirium protocol in place	Delirium, sever confusion/restlessness/agitation Needed delirium protocol	
Skin	CDI Repositions self Braden level: mild risk	Fragile, no wounds Braden level: mod. risk	Basic wound care 1 staff repositioning Braden level: high	Complex wound care Q2 hour 2 staff repositioning Braden level: severe	
Mobility	Independent Low fall risk Bed-bound	Supervised mobility SBA No transfer assistance Mod. fall risk	1 staff transfer Fall matts in place High fall risk	2 staff transfer Hoyer High fall risk	
Psychosocial	Family support meets psychosocial and spiritual needs.	Low level nursing support/high level family support Basic education needs	Mod. Level nursing support/mod. Family support Communication issues Help needed with goal setting	High level of nursing support/ low level family support Supervised visits Family meetings Complex family dynamics Extensive/ongoing education	
Care planning	No current needs Minimal education needs	D/C planning Supports in place Basic education needs	Routine D/C Supply/support coordination needed Mod. Education needs	Complex D/C Extensive care planning Extensive education needs	
					Total:

Score of: 7-12 = *A1*, 13-17 = *A2*, 18-22 = *A3*, 23-28 = *A4*. *A1* being the lowest care needs *A4* being the highest.

Figure 3. Hospice Acuity tool

Implementation

Approval from Montana State University Institutional Review Board will be sought in November 2022 and prior to starting the project. This author anticipates that the first stage of implementation will take place in December of 2022. Implementation of the project will include education of the stakeholders on use and indication of the acuity tool. Stakeholders include three full-time charge nurses, 2 part-time charge nurses, and 18 floor nurses. The author of this work will provide the education. After education has successfully transpired the stakeholders will be tasked with utilizing the tool, which entails assigning each patient on the unit with an acuity

level. This author will be available throughout this process to help answer questions and to provide guidance. However, the author will not have direct patient access to complete the PBA scales. After the initial acuity assignments are in place the charge nurses reviewed the appointed acuity index at the beginning of each shift and assigned all incoming patient with a number (A1, A2, A3, or A4).

Assumed barriers to the successful implementation of this QIP centers around stakeholder acceptance and engagement. Ombech (2021) discussed the top three learning needs/barriers to education and change implementation as: staff engagement, lack of resources, and lack of communication. An additional barrier to this project is time constraints. The initial assigning of an acuity rating to the whole unit may be quite time consuming. After this initial time commitment, it is assumed that this tool will become easier to use and will require less time to complete. Identifying perceived barriers is a key component to mitigating obstacles when implementing a change in process.

Prior to implementation of the PBA interrater reliability will be established via 4 case studies distributed to each charge nurse. The charge nurses will be asked to assign each provided case study with an acuity rating: A1, A2, A3, or A4. Discussion and education will be had based off their responses. Throughout the implementation phase of this project this author will be doing weekly check-ins with the staff members to continue to educate on the process, help to remove perceived barriers, and answer any questions or concerns that may arise.

Evaluation

Evaluation of the tool itself will be done based on stakeholder feedback as discussed above. Stakeholders include the charge nurses making the nursing assignments as well as

appointing the acuity scores to each individual patient. The individual nurses will also be given the opportunity to voice their opinions and concerns. Outcomes being measured for this project are nurse assignment satisfaction, patient fall rates, and medication errors. These metrics will be collected and reviewed prior to implementation of the tool and post-implementation.

Smart Goal #1: Nurse assignment satisfaction will increase by 25% by March 2023.

This goal of 25% improvement is based on the idea that the survey administers may be perceived as a job satisfaction survey and will not reflect only opinions based on nurse assignments alone.

- This author has developed a needs assessment questionnaire which asks about assignment satisfaction, how much input they have in their assignments, and how the unit communicates.
- This author will work hand-in-hand with the educational director to disperse the needs assessment survey, the educational director will help encourage unit participation.

Data to be collected:	Method:	Analysis:
A needs assessment questionnaire will be dispersed in August 2022 and again in March 2023	Survey Monkey questionnaire dispersed via email invite	Data extrapolation after at least 75% of the staff has responded to the survey.

Table 1: Smart Goal #1

Smart Goal #2: Fall rates will decrease by 50% by March 2023

This goal of decreasing fall rates by 50% is made with the idea that patient falls are multifactorial, and one intervention alone would not be conducive to achieving a 100% reduction.

- The education director of the unit has shared data on fall rates for the quarter prior to the project start date; January -June of 2022, which equaled 9 falls within the 2 quarters.

- The education director will share fall rates from December through March of 2023 for a final difference to be calculated from.

Data to be collected:	Method:	Analysis:
Data extrapolation will occur base off reported falls in the first and second quarter of 2022 and again in March 2023	Data will be pulled from the units database by the education director.	Data from the first and second quarters will be compared with post implementation data in March.

Table 2: Smart goal #2

Smart Goal #3: Medication errors will decrease by 50% by March 2023

This goal of decreasing medication rates by 50% is made with the idea that medication errors are multifactorial and one intervention alone would not be conducive to achieving a 100% reduction.

- The education director of the unit has shared data on medication errors rates for the quarters prior to the project start date; January -June of 2022, which equaled 6 medication errors within the 2 quarters.
- The education director will share medication error rates from December through March of 2023 for a final difference to be calculated from.

Data to be collected:	Method:	Analysis:
Data extrapolation will occur base off reported medication errors in the first and second quarter of and again in March 2023.	Data will be pulled from the units database by the education director.	Data from the first and second quarters will be compared with post implementation data in March.

Table 3: Smart goal #3

Conclusion

As this proposal demonstrates, the need for standardizing nurse to patient assignments based off care level and workload burden is crucial in promoting good quality nurse and patient outcomes. Our medical community is riddled with high levels of nurse burnout. Patients are suffering due to the high demand being placed on the nurses. Putting supports into place to help these overworked nurses will help alleviate workload strain and improve satisfaction. This, in turn, can potentially increase safety and effectiveness in patient care. The project presented here can lessen nurse burden by offering an evidence-based solution that can help provide the best care by aligning patient acuity with adequate nurse staffing.

Table 4

Data to be collected	Method of Collection	Planned data analysis
Early to mid-September 2022	Review of the literature to be completes by the end of September.	Data base searches including: CINAHL complete, PubMed, JBI, UpToDate, Cochrane, and Medline
Mid-September	Initial review of medication error rate and fall rate obtained.	Data extrapolation provided by the hospice unit educator.
Early October 2022	Needs assessment questionnaire response rate of at least 75%.	SurveyMonkey questionnaire develop by this project's writer.
Mid-October	Preliminary acuity scale developed and distributed to 2 primary charge nurses.	In person discussion for modification and improvement.
Early November 2022	Revision of the acuity scale off initial feedback from charge nurses and education manager.	In person discussion on usability for the revised scale.
Mid November	Distribution of the revised acuity scale to charges	" "
End of November	Feedback collected from charges and staff	SurveyMonkey questionnaire develop by this project's writer.
January 2023	Education on finalized acuity scale presented to stakeholders	Learning needs assessment done in person during the educational training.
March 2023	Final collection of data (needs assessment questionnaire and medication error and fall rates) will be extrapolated.	SurveyMonkey questionnaire developed by this project's writer. Data collection from the site on fall and medication error rate.
April 2023	Final acuity scale to be presented via project dissemination to stakeholders	
April 2023	Final project dissemination and presentation.	Power-point slide discussion and written body of work.

Table 4. SMART Goal and project timeline

Table 5

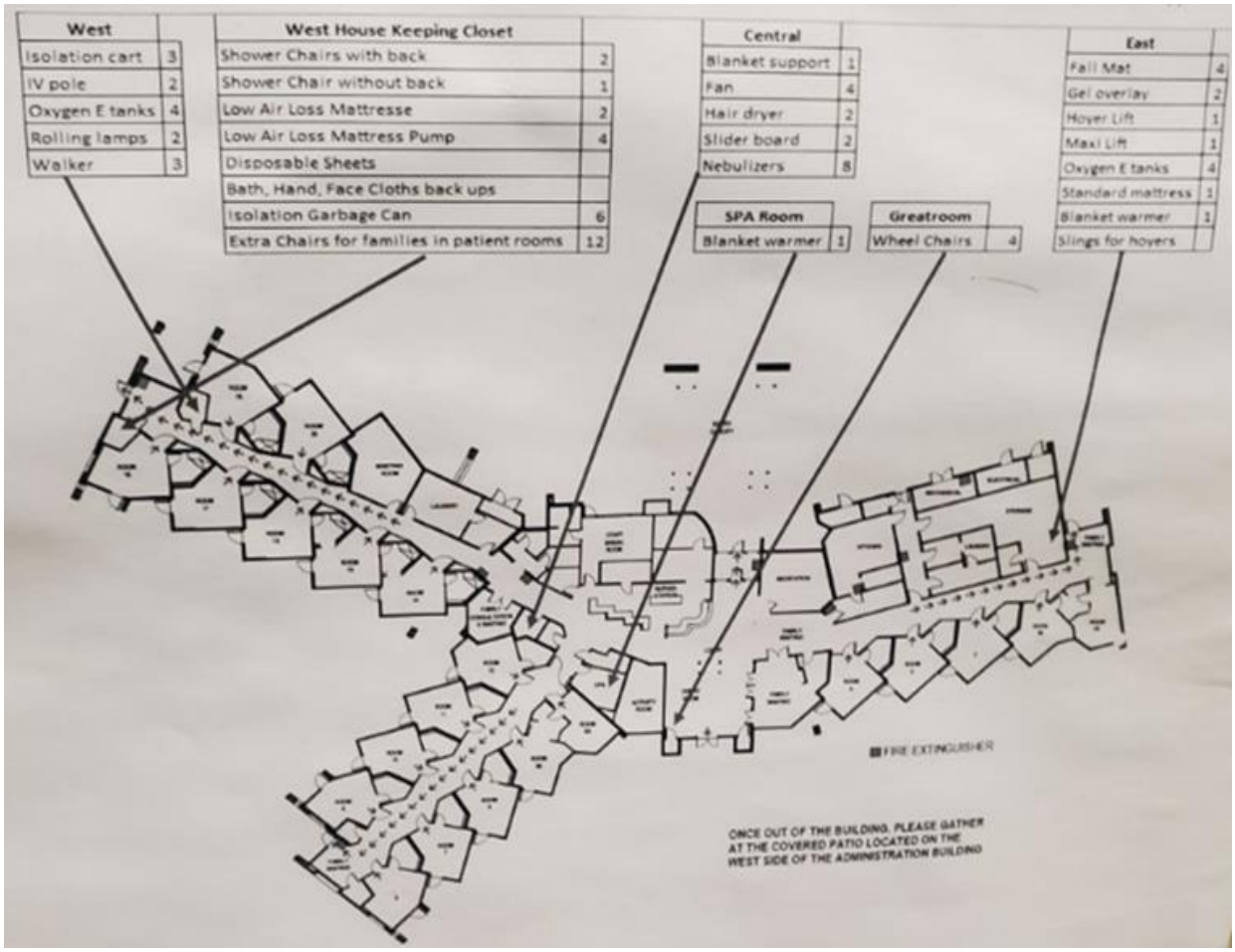

Table 5. Hospice Unit Geographical Layout

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CHAPTER THREE

DEVELOPMENT OF AN ACUITY SCALE FOR THE INPATIENT HOSPICE SETTING, A QUALITY IMPROVEMENT MANUSCRIPT

Abstract

Background: High workloads and patient acuity burdens have been linked to increased levels of nurse job dissatisfaction and burnout. Although this is discussed extensively in the literature, no streamlined solutions have been proposed. Balancing patient acuity and nurse staffing assignments is imperative to job satisfaction, nurse retention, and patient safety.

Objectives: The objective of this review and doctoral quality improvement project (QIP) was to help fill the gap in the literature and practice regarding patient-based acuity staffing standards, particularly in relation to hospice care.

Data sources: Databases searched for this review included – CINAHL complete, PubMed, JBI, UpToDate, Cochrane, and Medline. Data was also obtained for the QIP itself from December 2022 to March 2023.

Conclusions: A high correlation was noted between nurse job satisfaction and defining patient acuity. Also important were being mindful of geographical room location and continuity of care. This QI project demonstrated that patient acuity in the hospice setting could be an effective approach to improving staff satisfaction and ultimately patient safety.

Implications for practice*:* Implementation of facility specific acuity scale development and nurse involvement in acuity level assignments has the potential to positively impact nurse job satisfaction as well as patient safety in the hospice setting.

Introduction

Problem description

The Center for Medicare and Medicaid services (CMS) has identified key patient safety concerns affecting the medical community in the United States. Of these concerns patient falls, and medication errors are considered "never evens" meaning they should never happen (CMS, 2008). Unfortunately, such events do happen. A crucial measure in patient safety is to identify standardized approaches in the care design to achieve this "never" goal.

The in-patient hospice setting is no exception to these patient safety concerns. In fact, these settings can pose more barriers and complications to patient safety due to the complexity of the patients and the related multifaceted treatment plans. One of the main threats to patient safety that has been identified in the literature is inadequate nurse staffing and high workload burdens (Lehman, 2020).

Available Knowledge

Nurse burnout is a troubling problem that plagues the nursing workforce. An abundance of literature has identified heavy workloads as being one of the biggest contributing factors to nursing exhaustion and care fatigue (Maceri et al, 2019). The term workload in the nursing field does not have a clear definition. Instead, it carries a general idea of what takes place throughout a nurse's workday. Workload is described by Hummel et al as being "a measure of a relationship of the number of resources demanded by a task situation" (2020). Thus, attention to defining daily work demands will help quantify the nurse's workload. Using patient base acuity scales helps place numeric value on the day-to-day care needs of each individual patient. Use of a patient-based acuity (PBA) scale is key in allocating nurse resources in a way that would be most

beneficial to the institution and the patients. PBA scale assigns a numerical value to the patient workload and helps the charge nurse determine an equitable patient assignment to each nurse on duty, while considering patient geographical location and nurse skill mix. The Joanna Briggs Institute (JBI) recommends developing patient-based acuity ratings specific to the institution and the patients being cared for within that institution. This increases specificity to patient care needs and compliance from the nursing staff (Ndegwa, 2022). Ndegwa (2022) emphasized the importance of the utilization of a specific PBA stating, “measuring and controlling patient acuity is essential in the provision of competent patient care”.

Rational

Patients in specialty units, such as hospice, have unique needs that are often not reflected in traditional acuity scales. Administering medications and assisting with daily care regimens are only a small part of the whole care spectrum. Psychological factors, memory issues, complex pain management, and family dynamics are also components in the morass of the hospice patients care plan. The hospice patient carries many distinct aspects to their care that are not included in the basic conceptualization of what nursing care and treatments offer.

Hospice patients in general have drawn very little attention in the literature, especially in consideration of the nurse’s daily work experience. The idea of defining a hospice patient’s complex care needs on an acuity index has not been researched. The literature search conducted for this project exhausted numerous databases and resulted in only one published hospice specific acuity tool (Mary Potter Hospice, 2014).

Specific Aims

A collaborative hospice specific patient-based acuity scale has been developed and will continue to be improved upon, even after completion of this project, based on stakeholder feedback. The final acuity tool was implemented in 2023. The goal of this project was to improve patient safety, evidenced by decreased fall rates and medication errors within the first and second quarters of 2023. A follow up survey will also be conducted in March 2023. It is anticipated that this survey will demonstrate improvements in staff assignment and job satisfaction. SMART goals were set and utilized to guide this project and its outcomes.

Methods

To promote nurse staffing equity, job satisfaction, and improved patient safety a PBA tool must be developed specifically for the hospice population. In addition to the development of the population and unit specific tool, education with the nurses using the tool must occur. JBI evidence summaries were utilized to systematically identify best practice recommendations. The acuity scale development process must take into consideration the importance of the nurses in the hospice unit being involved in the development of the tool.

Best practice recommendations proposed by Ombech (2021) for education include formalizing an education structure and empowering the charge nurse to participate in decision-making activities, specifically being involved in the development of the tool they will be using. Ombech (2021) also reports recommendations regarding assigning a staff educator and identified four barriers to the education process: engagement, staffing, lack of resources, and lack of communication. Being mindful of these barriers was helpful in promoting proper and effective discussion and education regarding the new tool.

As mentioned previously, it is imperative that a PBA be institution and patient population specific. Best practice recommendations also included nurse involvement and input on the development of the tool. Nurses being made aware of the modifications to practice prior to implementation of those changes. Assessments of the change impact should be documented and discussed by key stakeholders and education on the content of the acuity scales be provided to all nursing staff. In addition to the acuity assignments, geographical room location and continuity of care is also a consideration when deciding the nurse/patient assignment (Ndegwa, 2022).

Guiding Framework

The 5-why's root cause analysis tool (Figure 5) was utilized to guide this project, to identify key issues in staffing practices, and implications for patient safety concerns. The 5 why's is a simple, yet effective way to tackle multi-faceted problems. The process begins by simply by posing "why" questions about particular issues. Then re-posing the same "why" questions and additional "why" questions that arose during the initial investigation This method is employed to gain further information and substantial answer to the overall goal of the project (Voehl, 2016, Serrat, 2017, and Gangidi, 2018) The initial questions posed for this project were (a) why are nurses unhappy with their assignments; (b) why are nursing assignments assigned the way they are; (c) why is patient safety effected by nursing assignments; (d) why does this facility need help with patient assignment and staffing equity; and finally € why is there little literature available for this important topic and patient population. These questions led me to identify key issues within this hospice unit and helped me find solutions supported by the literature and data, albeit hard to find.

Context

The author of this work approached a hospice unit to seek guidance on a quality improvement project that would potentially benefit not only their unit but the hospice patient population in general. This author thought it important to focus on this underserved and under-represented population. After some discussion and interview with the unit's educational director, a request was made to focus on the development of a patient-based acuity scale with a goal of more equitable staffing to help promote patient safety and staff satisfaction. This was followed by dialogue with the primary stakeholders on the development of the tool. Consideration was placed on their specific suggestions, wants, and goals for the final tool. Historically used tools were presented to this writer and discussion was had as to why these previously used tools had failed in practice. Interest and positivity were voiced by the stakeholders regarding this project and its outcome goals.

Intervention

A seven item, four-level patient-based, hospice specific, acuity tool based on specified patient needs and nurse feedback was created for this project. Scoring ranges from seven to twenty-eight, with twenty-eight being the highest level of care needs. An appointed score of A1, A2, A3, or A4 was allocated to each patient to facilitate equitable nursing assignments. This tool aligns with the only known published acuity tool specific to the hospice population (Mary Potter Hospice, 2014) In October of 2022 the initial tool was developed and then distributed for feedback from staff and charge nurses. The tool was revised based on feedback received. The approach employed was constructed using Joanna Briggs Institute's (JBI) best practice recommendations which encourages stakeholder input to achieve staff satisfaction and

acceptance of the change being delivered (Ndegwa, 2022 and Ombech, 2021). After revisions were incorporated, the tool was redistributed to the staff in November 2022, again aiming to gain additional feedback. In February 2023 the tool was piloted by assigning each new patient entering the unit an acuity score. Once the goal of 50 patients was reached, the tool was redistributed, and underwent additional revisions based on the responses and recommendations of the charge and staff nurses.

The revised tool was anticipated to not only help this facility manage their nurse-to-patient assignments but to promote staff satisfaction and decrease patient fall rates and medication errors. Assaye, et al (2021) highlights the importance of projects such as this one by discussing the lack of evidence promoting structured nurse staffing assignments, and workforce and patient outcomes. Understanding the impacts of nurse staffing and workload is key in mitigating adverse patient outcomes (Moola, 2022).

Measures

SMART goals were set and utilized to guide this project and its outcomes. Approval from Montana State University Institutional Review Board was obtained prior to the start of this project. Implementation of the project involved education of the stakeholders on use and indication of the acuity tool. Stakeholders included three full-time charge nurses, 2 part-time charge nurses, and 18 floor nurses.

A goal of 50 new patient admissions was placed; but achieving this goal was unpredictable as admissions are unpredictable. Consequently, there were delays in implementing the full roll-out which impacted the length of the project and the time in which patient safety and staff satisfaction data could be collected. During this initial phase it was found that a large

majority of the patients being admitted fell into the A3 (acuity level 3) range. It was found that daily care assistance and impulsivity were two categories that needed to be further defined. However, time constraints limited further refining of the scale as the trial phase was still in process at the end of this project's timeframe. Throughout the implementation phase of this project this author did weekly check-ins with the staff members to continue education on the process, help remove perceived barriers, and answer any questions or concerns that arose.

Prior to implementation of the PBA interrater reliability was established by using four case studies that were distributed to each charge nurse. The charge nurses were asked to assign each provided case study with an acuity rating: A1, A2, A3, or A4. After allowing for adequate education time the trial period of assigning an acuity level to all new admissions began. The acuity rating was assigned to the patient upon admission by the charge nurse. The rating was reported off to subsequent charge nurses at each change of shift and were utilized to help assign equitable workloads to the nurses. The acuity rating was reassessed each time the patient had a change in condition or a change in functionality. This revision was initiated by the nurse caring for the patient. Actual changes to the acuity assignment were done by the charge nurse based off the new information provided by the primary nurse.

Analysis

As previously mentioned, evaluation of the tool itself was based on stakeholder feedback. Stakeholders include the charge nurses making the nursing assignments and appointing the acuity scores to each individual patient. The individual nurses were also given the opportunity to voice their opinions and concerns. Outcomes measured for this project were nurse assignment

satisfaction, patient fall rates, and medication errors. These metrics were collected and reviewed prior to implementation of the tool and post-implementation.

Smart Goal #1: Nurse assignment satisfaction will increase by 25% by March 2023.

This goal of 25% improvement was based on the idea that the survey administered may be perceived as a job satisfaction survey rather than addressing satisfaction with nurse assignments.

- This author has developed a needs assessment questionnaire which asked about assignment satisfaction, how much input they have in their assignments, and how the unit communicates.
- This author worked hand-in-hand with the educational director to disperse the needs assessment survey, the educational director helped encourage unit participation.

Data to be collected:	Method:	Analysis:
A needs assessment questionnaire will be dispersed in August 2022 and again in March 2023	Survey Monkey questionnaire dispersed via email invite	Data extrapolation after at least 75% of the staff has responded to the survey.

Table 2: Smart goal #1

Smart Goal #2: Fall rates will decrease by 50% by March 2023.

This goal of decreasing fall rates by 50% was made with the idea that patient falls are multifactorial thus it would be unrealistic that a single intervention would result in a 100% reduction.

- The education director of the unit shared data on fall rates from the first and second quarters of 2022; January -June of 2022, which equaled to 9 falls.

- The education director shared fall rates from December 2022 through March of 2023 which allowed for a comparison between these months and the first two quarters of 2022.

Data to be collected:	Method:	Analysis:
Data extrapolation will occur base off reported falls in the first and second quarter of 2022 and again in March 2023	Data will be pulled from the units database by the education director.	Data from the first and second quarters will be compared with post implementation data in March.

Table 3: Smart goal #2

Smart Goal #3: Medication errors will decrease by 50% by March 2023.

This goal of decreasing medication rates by 50% was made with the idea that medication errors are multifactorial and a single intervention alone is insufficient to achieve a 100% reduction.

- The education director of the unit shared data on medication errors rates from the first and second quarters of 2022; January -June of 2022, which equaled 6 medication errors.
- The education director will share medication error rates from December 2022 through March of 2023 which allowed for a comparison between these months and the first two quarters of 2022.

Data to be collected:	Method:	Analysis:
Data extrapolation will occur base off reported medication errors in the first and second quarter of 2022 and again in March 2023.	Data will be pulled from the units database by the education director.	Data from the first and second quarters will be compared with post implementation data in March.

Table 4: Smart goal # 3

Ethical Considerations

The hospice patient population is a vulnerable patient group. At this phase in their health journey patients are typically quite ill and frequently have lost the capacity to advocate for themselves. The healthcare system must account for this and take careful care when working with and making policies related to these vulnerable individuals. As previously mentioned, the hospice population tends to be overlooked. It is important that more projects such as the one

described here be conducted to ensure that we, as a healthcare community, are providing this special group of people with the care they require and deserve.

Results

An examination of the literature revealed a relationship between nurse workload and high rates of burn out. Many articles advocated for additional research to determine the causation between nurse-to-patient work assignment equitability and poor patient outcomes. Acar and Butt (2016) denote this concept by saying "nurse patient assignments have received very little attention…even though they have a direct and immediate impact on nurses' activities during a shift" and go on to discuss the negative impacts on patient care. Also noted in the literature, was an emphasis on developing unit and patient specific acuity scales to help evenly distribute workload, thus decreasing burnout levels and poor patient outcomes.

Results are limited and preliminary as the acuity tool did not make it out of the initial fifty-patient trial period prior due to the deadline for this quality improvement project. The initial results of the project are as follows.

Staff satisfaction survey distributed to nursing staff pre-implementation and post-implementation showed improved satisfaction ratings. Pre-implementation, 15 nurses responded, and post-implementation 7 nurses responded to the survey. Responses were assigned a numerical value, of which the comparison results were calculated, keeping in mind and accounting for the unequal response numbers. See appendix A for a full list of questions and responses. Most notable results from the survey are a 22.4% improvement in question number four which asks about assignment distribution equality. Question number two which inquiries about how often hourly rounding can be completed rose by 19.2%. The percentage of time these nurses felt as

though they were able to provide quality care rose by 2%. The time in which they were able to complete bedside charting did not change. When asked if these nurses were satisfied with their patient assignment, satisfaction rate rose by 9% overall.

Fall rates and medication errors did not share these promising results. Fall which occurred in the first two quarters of 2022 (January-June) were 9, compared with 7.3 falls which occurred in December 2022 – March of 2023. No data was made available to this author from June to December 2022. Calculated fall rates show an increase of 35%, accounting for the unequal time frames being measured.

Medication errors that occurred during the first two quarters of 2022 demonstrated 6 missteps. This number was compared with 7.3 medication errors that occurred between December to March which revealed a 10.8% increase, also keeping in mind the difference in the timeframe in which these numbers were recorded. No data was made available to this author from June to December 2022.

Discussion

Summary

Unfortunately, the timeframe for this project coupled with the delays in implementation restricted results. The post-implementation survey only received seven responses which is a 39% response rate, the goal was 75% of the 18 total nurses working on the unit. In addition to the limited response rate, results for all studied variables (nurse satisfaction, falls, and medication errors) were impacted by the fact that the acuity tool did not make it out of the initial trial phase. The goal of fifty new patients being assigned a score was not met during this project's timeframe.

Smart Goal #1: Nurse assignment satisfaction will increase by 25% by March 2023. Was not met as there was an overall improvement of only 10.5%.

Smart Goal #2: Fall rates will decrease by 50% by March 2023. Was not met as the fall occurrences actually increased during the trial phase of this project.

Smart Goal #3: Medication errors will decrease by 50% by March 2023. Was also not met as these events increased by 10.8%.

Interpretation

More research needs to be done to validate acuity tools as a way to improve patient safety while also improving nurse job satisfaction. The goals for this project were not met but the results collected do show promise in the arena of nurse job satisfaction. This author believes, based on the literature, that given more time this intervention would prove to be beneficial for patient safety and decreasing patient safety events.

Limitation

The implementation phase of this project was intended to begin in January of 2023. However, due to a delay in Montana State University IRB approval process and an additional unexpected delay with the hospice facility the trial phase did not begin until mid-February. This time constraint delayed full roll-out which limited the time in which patient safety and staff satisfaction data was impacted. The initial goal of assigning an acuity score to fifty newly admitted patients also posed as an unpredictable variable, achieving this goal was uncertain as admissions rates are unforeseeable. These delays led to limitations in the data that could be collected prior to the late March deadline.

Conclusion

PBA scales can be described as an alpha-numeric value assigned to individual patients and based off the projected complex healthcare needs and related nursing care plans. This is a fluid number that can be reassessed and reassigned at any time throughout the care continuum. PBA has been associated with positive clinical results and improved outcomes (Lehman and Harris, 2020). The literature, albeit limited, has clearly identified a correlation between the use of PBAs for staffing assignments with job satisfaction and patient safety. However, more research within the various healthcare settings (such as hospice) is needed to substantiate the interconnection. Additional research is also needed to develop effective interventions that address nurse job satisfaction and nurse retention as a way to ensure and promote patient safety.

As this proposal demonstrates, the need for standardizing nurse to patient assignments based off care level and workload burden is crucial in promoting good quality nurse and patient outcomes. Our medical community is riddled with high levels of nurse burnout. Patients are suffering due to the high demands being placed on nurses. Supports are needed to help alleviate workload strain and improve satisfaction. This quality improvement project, in turn, can potentially increase safety and effectiveness in patient care. The project presented here can lessen nurse burden by offering an evidence-based solution that can help provide the best care by aligning patient acuity with adequate nurse staffing.

Other information

Funding

This was an unfunded project. The only cost incurred for this project was supplying the paper acuity tool during the initial phases through the end of the project. This was a nominal cost and was absorbed by both this author and the institution.

Acknowledgement

This author would like to thank the co-contributor and mentors during this project: Dr Sandra Benavides-Vaello, Dr Elizabeth Johnson, and Dr Margret Hammersla for their vital guidance and recommendations in the development of this project. This author would also like to thank the two site representatives who worked diligently to help progress this project for the benefit of their hospice unit.

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CHAPTER FOUR

DNP ESSENTIALS REFELCTION

Meeting the DNP Essentials

The Doctorate of Nursing Practice essentials, to me, are a framework that guides the education I received throughout this program. The essentials have helped me to gain an understanding of the relevance of what is being taught to me. The DNP program has in turn helped me meet the essentials by providing me with well-rounded learning experiences in both the didactic and clinical aspects of my education. Most of the instructors have pushed me to achieve things that prior to today I would not have thought were possible.

Essential I: Scientific Underpinnings for Practice

I am so excited to begin my new role as a nurse practitioner. I feel as though this program has helped to prepare me to care for individuals in all aspects of life, from birth to death. I believe the education I have received has been well rounded and applicable to all aspects of providing quality, compassionate care to the individuals I will eventually call “my patients". There is so much more to being a Nurse Practitioner than simply understanding pathophysiology and pharmacology. The art of nursing is retained and promoted when nurses maximize their education and training. Throughout this program I have gained a better understanding of health disparities, ethical considerations, and nursing theories to accompany the continuation of my education of the human body and medicine as a whole. I believe that what makes the Nurse Practitioner a superior provider is that we are taught about all aspects of health and health care.

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

Essential II really encompasses my experience with the DNP project. The whole project really led me to think in an entirely new way about healthcare systems. It forced me to think more deeply about what organization and systems leadership means. Essential II speaks of accountability for quality, communication, and awareness of organizational consideration like culture and ethics. All these ideas were pivotal in developing and implementing the project. My project patient population was a vulnerable population, and the culture of the nurses was very deep and engrained. By proving to these nurses that I was aware of and sensitive to their traditional way of working helped me achieve my goals for this project. I had to understand this concept and show them that my change project really was to improve their work environment and to help them provide better care for their patients.

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Throughout this entire program we have been challenged to not only do research but to conduct research with the intent to inform our practice as Nurse Practitioners. We weren't just reading to read; we were reading to guide the way we care for patients. I learned how to sift through a barrage of information to find best practice solutions to problems. Not only did I learn how to find the information, but I learned how to best assimilate the information then implement processes based on that information. I learned the art of dissemination and collaboration which, in my opinion, is essential to changing the healthcare world.

Essential IV: Information Systems/Technology and Patient Care
Technology for the Improvement and Transformation of Health Care

Essential IV encompasses my learning to use different databases to search different topics throughout my schooling. Learning that some databases are better for specific topics such as the JoAnna Briggs Institute, which is focused on best practice articles, while Up to Date is best utilized when one is looking for treatment algorithms and treatment recommendations. Another information technology hurdle that I overcame, that I didn't think possible, was learning all the different electronic health systems during my clinicals. I learned how to use five different systems and by the end of each semester I was proficient in all of them, which I would never have guessed possible.

Essential V: Health Care Policy for Advocacy in Health Care

Working with our local community health clinic helped me get an understanding on policy and how it directly affects care delivery. The community health clinic services low income and insured people in our area. The organization is federally funded thus must abide by federal policies. This seemed to be both beneficial and limiting all at the same time. Seeing this in action really solidified the concept of; if you don't like policies do something to change it. Policies are put into place to regulate care in hopes of improving it as well as to reduce health disparities. Our job as healthcare providers is to play an active role in the making of said policies. We can't just sit back and complain about the way the healthcare system works; we must lead the change we want to see.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

My clinical experiences really emphasized concepts of Essential VI in my opinion. During my clinical experiences I felt like I was not only learning clinical skills from my preceptors, but I was also learning how to collaborate with them and from them. Being able to work hand in hand with PA's, NP's, and MD's really helped me gain a better understanding of what is needed to effectively communicate and collaborate with other providers. One of my specialty rotations I had the opportunity to work with one of the directors/co-owners of the urgent care I was at. During this rotation I was able to see how he employed collaboration techniques to push forth the vision he wanted for business. He was an extremely effective communicator, and it was amazing to see him work through issues and resolve them as they arose.

Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

Clinical prevention can easily be thought of as preventative medicine. The concept makes sense, and the policies and recommendations are there to support the idea. The population being served, however, makes all the difference in the world. Idaho is much like Montana in that a good portion of the population is not on board with many suggested preventative medicine recommendations, such as vaccines. During my pediatric rotation I was quite surprised to see how many parents elected not to vaccinate their children, and the ones that did tended to opt for a delayed vaccine schedule. I know that the practice I was working with attracted more of the "alternative" or "freethinkers" of our community, but it still came as a shock. I believe that our community population health is put at a higher risk due to their preferences. It is not uncommon

to see whooping cough in the ER where I work. The provider I worked with did a great job in encouraging preventative health behaviors, but discussion only goes so far.

Essential VIII: Advanced Nursing Practice

Essential VIII really sums up the DNP program as a whole. I have learned how to take my nursing assessment skills to the next level. I am understanding more and more about how imperative therapeutic communication is in the spectrum of care provided. I have gained so much understanding on how much provider and patient relationship development leads to better care delivery. The ability for me to find, evaluate, and implement evidence-based care has been a lifesaver in my clinicals and has sparked many exciting conversations with my preceptors.

QI project impacting my future career

At the beginning of my quality improvement project, I felt like a deer in headlights. I had no idea what to do or where to start. I felt like I would never be able to pull off something that would impact an entire health system. Once I decided on a topic of interest and started to delve into the project things started to fall into place and became easier. The goal seemed to feel more and more achievable as time went on. I feel like this is a nutshell of the way the program as a whole feels. When I started the program, I was excited and nervous. It felt like such a lofty goal to be able to complete and then, finally, here I am at the end of the program.

The project has helped me gain confidence in my ability to actually seek out, understand, and apply evidence-based knowledge into practice. It has also helped me gain confidence in my ability to impact change. Knowing where to start, then how to reach the finish line has laid a pathway for me to feel like I could do it all again with whatever problem may arise in my future

practice. I have never looked at myself as a leader or even a leader type of person. This project has helped me prove to myself that I can, in fact, lead and lead change.

The DNP program and my future career

There are a few different ways that I can think of when I think of how I have grown over the last few years within the constructs of this educational program. I think one major arena of growth is in my understanding of general systems thinking and with identifying system failure/fragmentation. Understanding how to look at things in systems type of approach, i.e. microsystems vs macrosystems, has helped me grasp the idea of change and the potential to embark on change activities. Being able to look at the healthcare field not as a huge beast of policies and processes but as a conglomeration of smaller systems working together for a greater good has really helped with accepting that change is, in fact, possible.

Another pretty major area of growth that I have experienced is my confidence level. I have always feared that I would not be able to achieve an accomplishment as big as a doctorate. Not only am I a first-generation college student but I also have suffered a stroke in the past, so my brain doesn't work the same as it used to and my level of retention suffers dramatically. This schooling process has been the hardest thing I have ever gone through, and I am so excited that I am actually going to make it to the end. I do have to say that if it wasn't for some key instructors and my family, I would never have made it. I am at the end of the educational journey and not only have I been successful in the schooling part I have also been successful in the clinical and have received two job offers from my clinical sites. I am so excited to become a family care provider and I finally have the confidence to be assured that I can be not only a good provider, but I can be an amazing one.

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APPENDICIES

APPENDIX A:

NURSE ASSIGNMENT SATISFACTION SURVEY QUESTIONNAIRE

Figure 1. Nurse Assignment Satisfaction Survey Questionnaire

1. What percent of time are you able to complete 100% of **bedside** charting (at the bedside)?

- 25% of the time
- 50% of the time
- 75% of the time
- 100% of the time
- Not a priority
- I don't do bedside charting

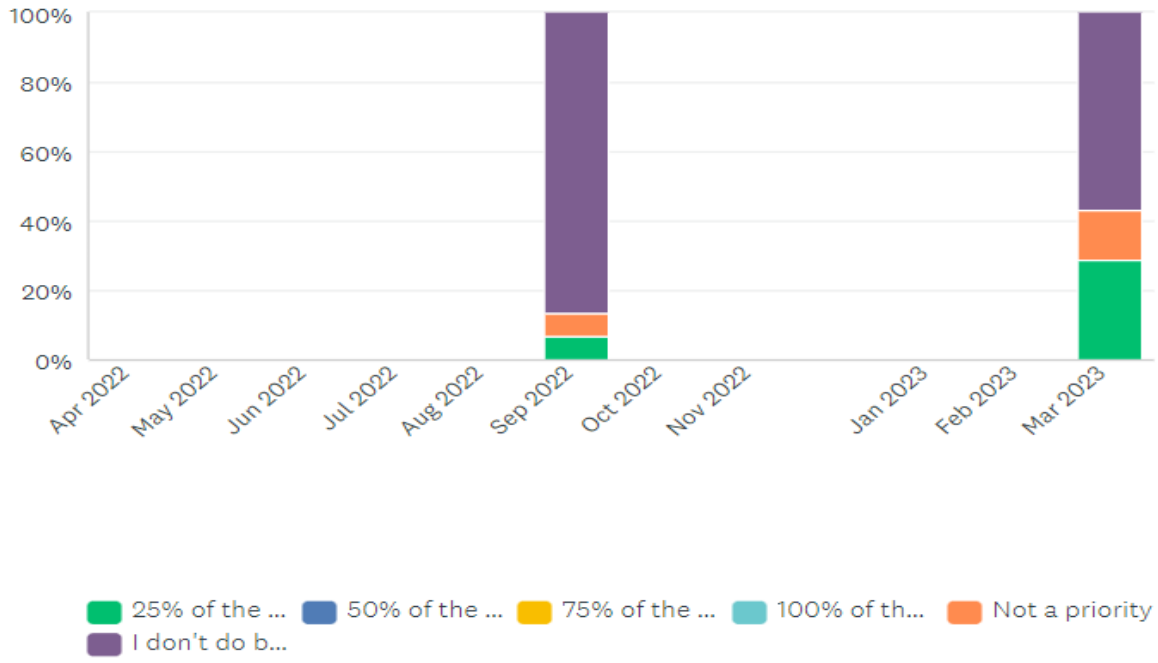


Figure 1. Nurse Assignment Satisfaction Survey Questionnaire continued

2. What percent of the time do you feel hourly rounding can be completed by your team?

- 25% of the time
- 50% of the time
- 75% of the time
- 100% of the time
- Never

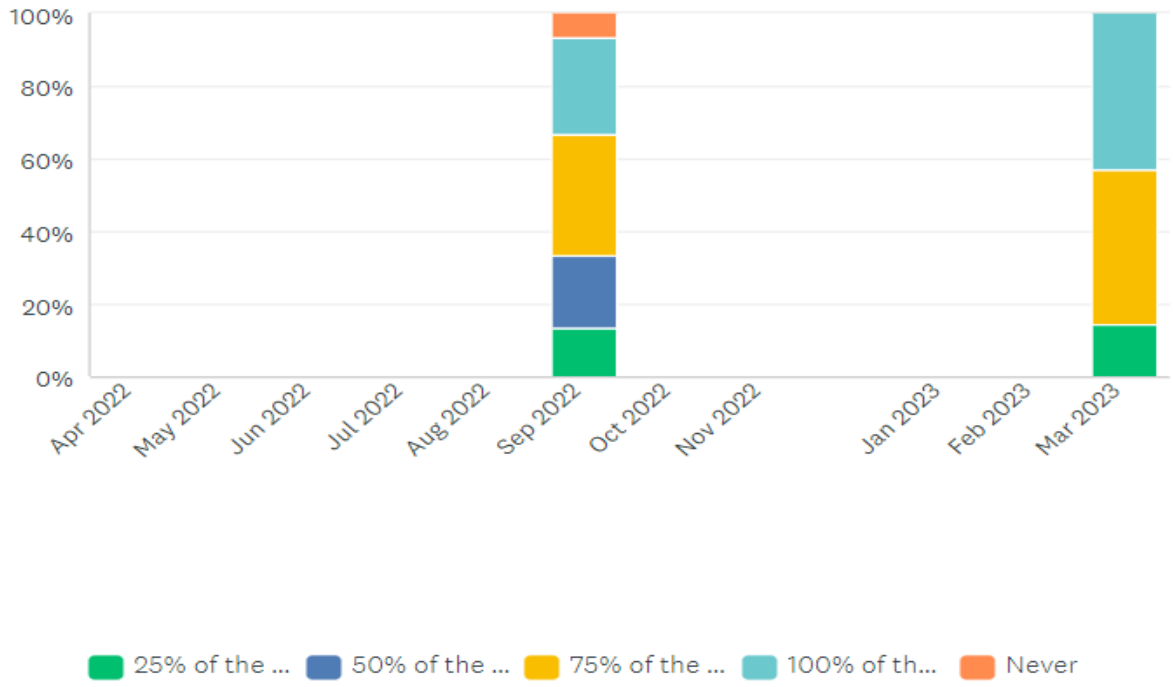


Figure 1. Nurse Assignment Satisfaction Survey Questionnaire continued

3. What percent of the time do you feel you are able to provide quality care?

- 25% of the time
- 50% of the time
- 75% of the time
- 100% of the time

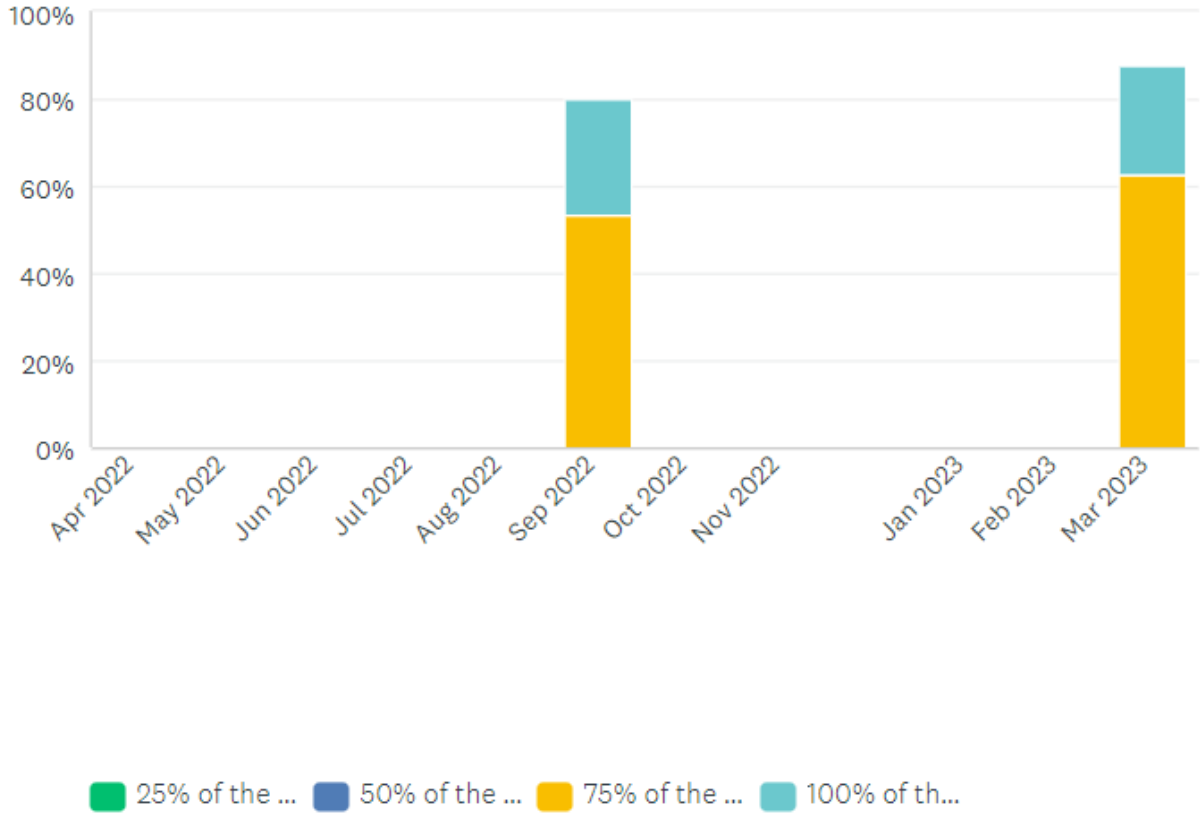


Figure 1. Nurse Assignment Satisfaction Survey Questionnaire Continued

4. What percent of the time do you feel your assignment is equitable (distributed evenly)?

- 25% of the time
- 50% of the time
- 75% of the time
- 100% of the time

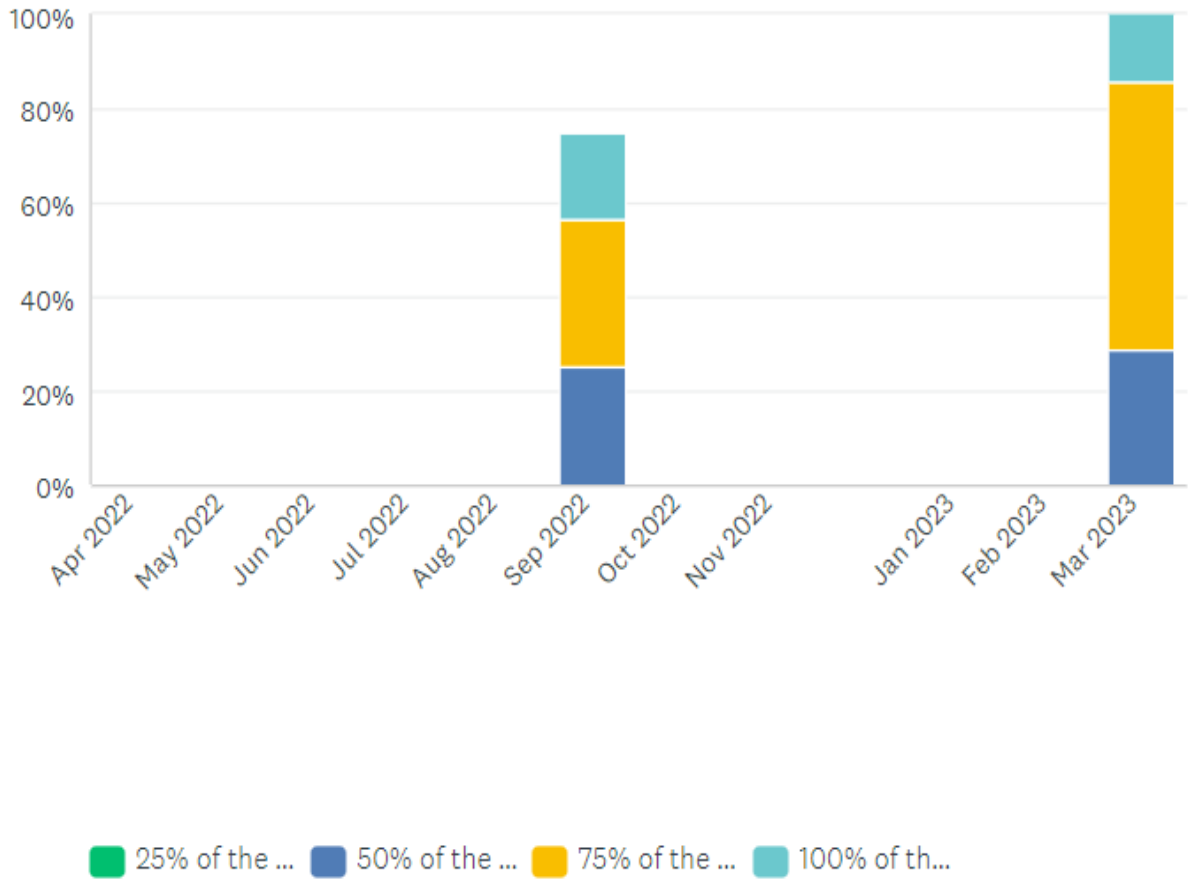


Figure 1. Nurse Assignment Satisfaction Survey Questionnaire Continued

5. How satisfied are you with your daily nurse to patient assignment?

- Extremely satisfied
- Satisfied
- Neutral
- Dissatisfied
- Extremely dissatisfied

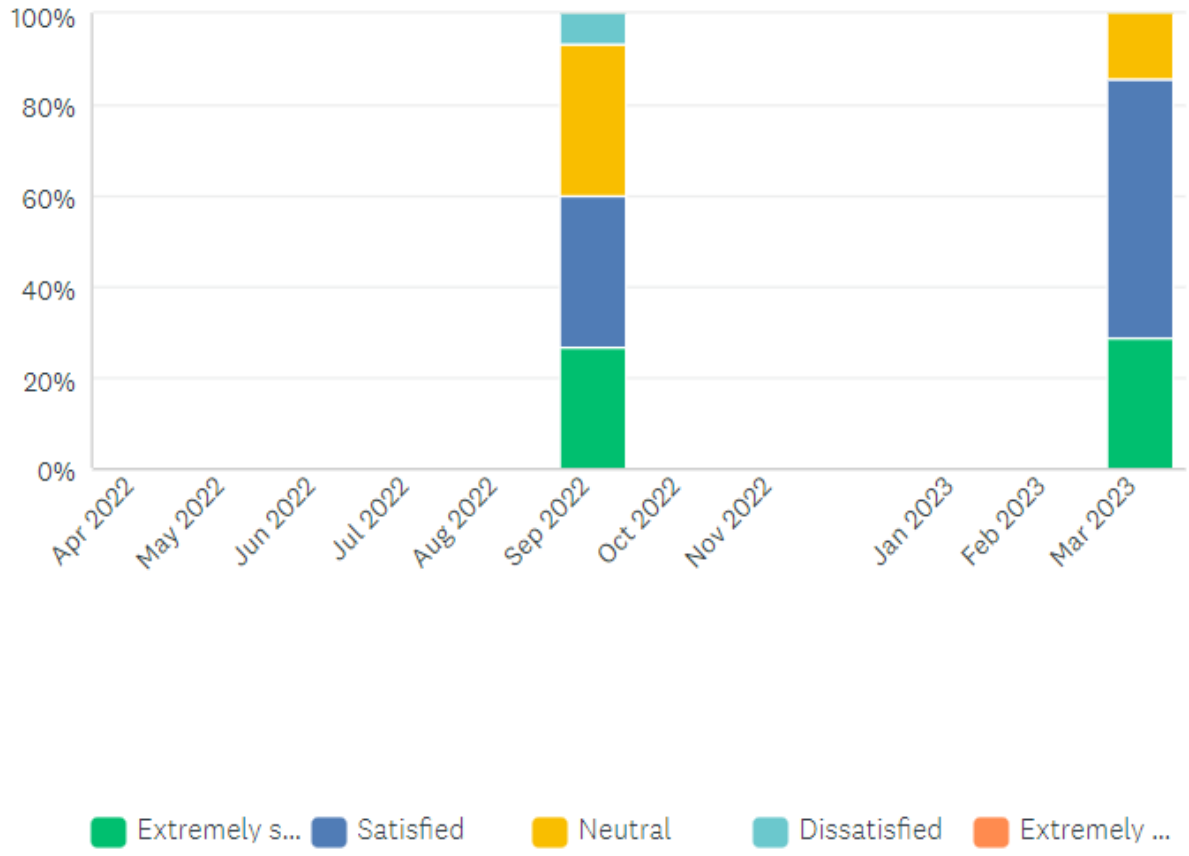
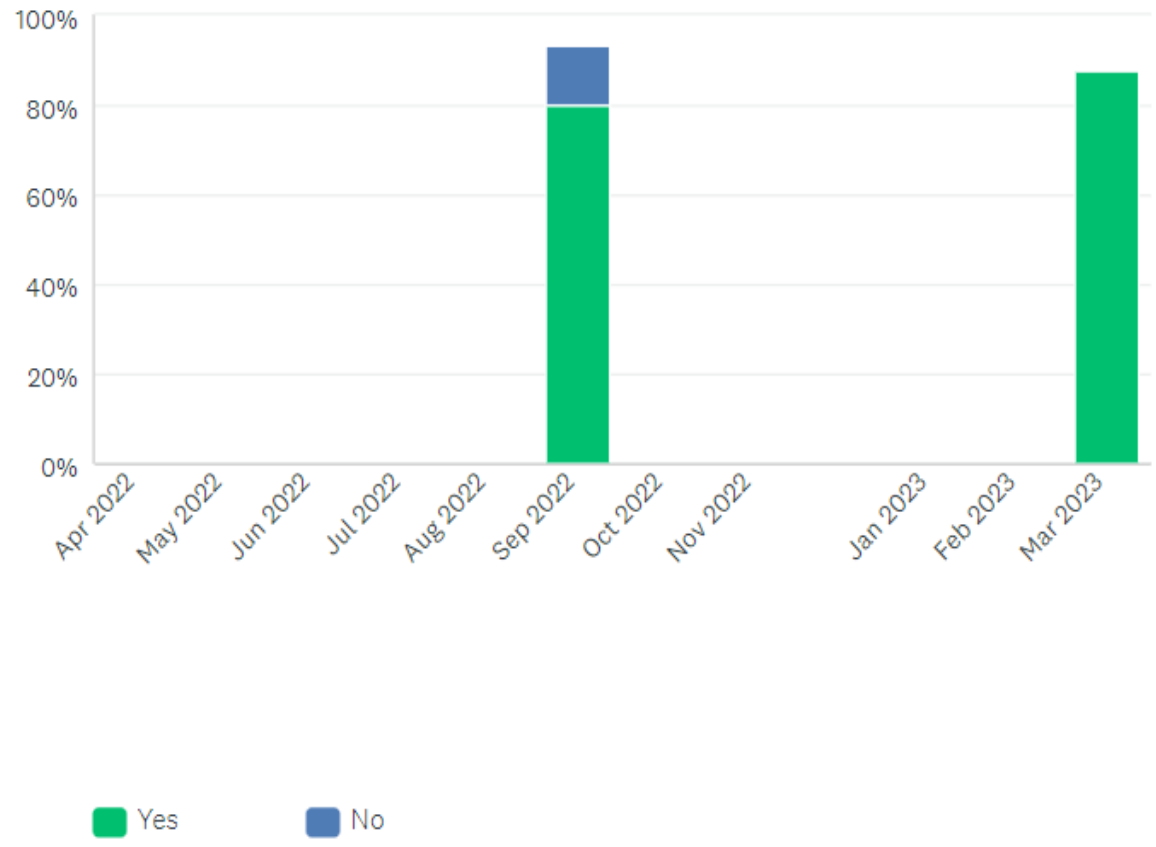


Figure 1. Nurse Assignment Satisfaction Survey Questionnaire Continued

6. Are you able to complete your job to you satisfaction with the paid time available?

- Yes
- No



APPENDIX B

INTERRATER RELIABILITY CASE STUDY

Appendix B. Interrater Reliability Case Study

1. 89-year-old male in an in-patient hospice unit with end stage lung cancer diagnosis. He is independent with his ADL's and is only staying on the unit for a short period of time while his family is out of town. He takes Morphine PO every 4 hours as needed in addition to his normal daily medications. He is alert and oriented and is a moderate fall risk related to his use of Morphine. Skin is CDI. His family is supportive and takes care of him usually. He, and his family are knowledgeable about his prognosis and are at ease with the end-of-life care planning. What is his acuity score?

2. 73-year-old female on an in-patient hospice unit with end-stage dementia. She is bed bound and no longer taking in PO nutrition, hydration, or medications. She is on Q2 hour IV Dilaudid as well as frequent doses of IV lorazepam to manage her agitation. She is 91 lbs and requires full cares and is completely bed bound. She no longer utilizes enteral feedings but has been battling severe constipation. She has no skin breakdown but is at high risk due to her bedbound status. Her family is quite anxious about her health and has little faith that the staff "knows what they are doing". Family care conferences have taken place, but issues continue to arise. They know she is dying but believe that she "still has a lot of fight left in her". What is her acuity score?

3. 91-year-old female coming into the hospice house after electing to discontinue dialysis. She utilizes IV and PO Morphine as needed in addition to her daily medications. Her pain is moderately controlled, and she has been experiencing constipation which is somewhat controlled with PRN laxatives. She is a 2 staff transfer and has limited in-bed mobility. She has 3 stage 4 pressure ulcers which requires complex dressing changes daily. She is alert and oriented x4 but attempts to be independent and has fallen multiple times trying to get out of bed, fall matts are in place. She can feed herself but needs help setting her tray up. She is able to perform her own ADL's with minimal staff assistance. She has no family in the area, but they are supportive and plan on coming to see her within the next week. They are somewhat familiar with hospice but have many questions about what will transpire within her stay at the hospice house. She is a practicing Christian, and her pastor visits her regularly. What is her acuity score?

4. 86-year-old male admitted to hospice from the ER for end of life care due to septic pneumonia. He is oriented but somewhat sedated due to utilization of a pain pump. He is a 2 staff bathroom assist and prefers to get out of bed for his toileting needs, his is unsteady on his feet. He Is a high fall risk. He has an unstageable pressure ulcer on his coccyx requiring basic wound care and frequent repositioning. He only requires 1 staff member to help with repositioning as he is still able to move himself in bed. He is reliant on enteral feedings and hydrations. Care planning will be taking place in the next day to decide if this should be discontinued. His family is moderately supportive and has many

unanswered questions. They are not sure if he will stay at the hospice house or if they can support him at home. What is his acuity score?

Figure 4. Patient Safety Event Data Extrapolation

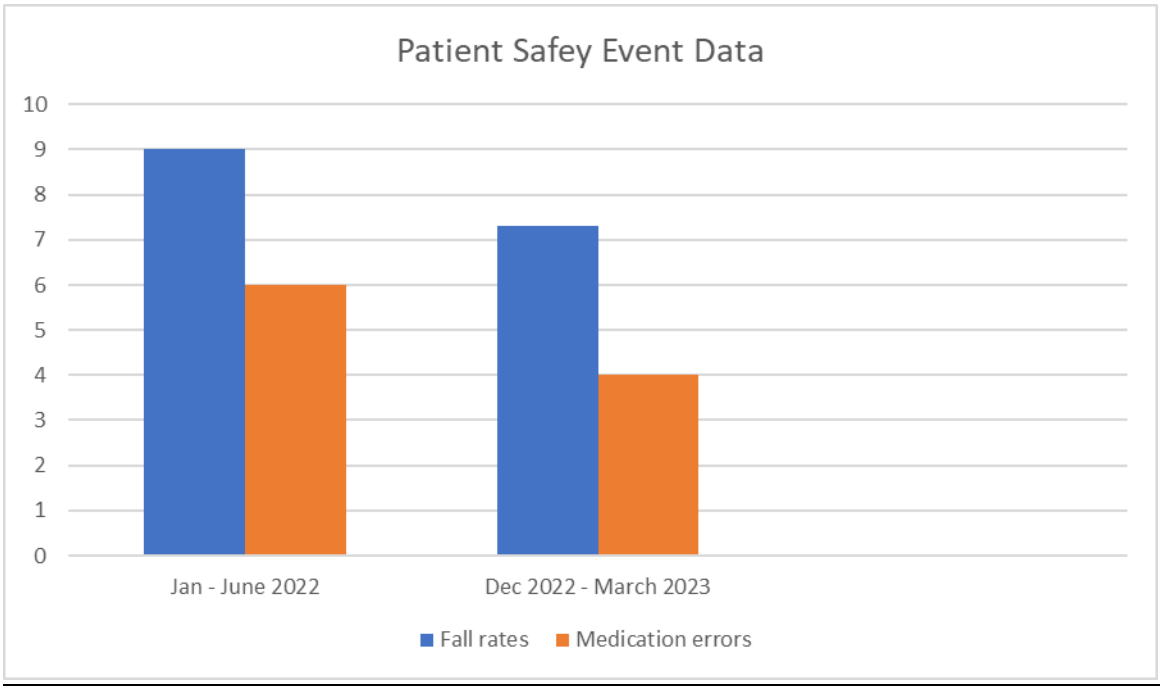


Figure 5. The 5 Why's Root Cause Analysis Tool, Guiding Framework