Promoting Patient Preferences Through Nurse-prompted Elicitation of Daily Goals: A DNP Scholarly Project

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Abstract

Background: There currently exists a number of protocols and best practice guidelines that emphasize the importance of engaging patients to identify their preferences and to establish goals of care in order to improve both the patient experience and physical care. However, there are often gaps between patient and provider perceptions, as well as a lack of initiating crucial patient-centered conversations.

Purpose: The purpose of this project was to measure the effect of nurse prompts on elicitation and documentation of patients' daily goals of care and patients' perception, or satisfaction with, patient centered care. This project seeks to answer the following: does a nurse-prompted daily goals of care assessment improve documentation of goals, impact patient perception of care and impact nurses' satisfaction and perceived barriers to prompting goals?

Methods: A study of the outcomes of nurse prompts to elicit patient goals and promote patient centered-care was performed. Nurses on an acute cardiology unit received information regarding the implementation of nurse prompts to elicit patient goals. This intervention consisted of a brief introduction to nurse prompts at a monthly nursing meeting, a PowerPoint emailed to staff, and follow-up one-on-one reminder for nursing staff. Whiteboards were audited before and after the intervention, to compare how often patient goals were recorded. Patients were given a five question Likert survey in before and after groups to ascertain whether staff addressed patient goals and whether they were meaningful to the patients. A Likert survey was distributed to nurses to determine their satisfaction with goal prompts as well as perceived barriers.

Results: Observed whiteboard documentation of patient daily goals increased from 26.0% to 68.4%. Chi-square analysis showed a statistically significant increase in whiteboard goal documentation ($p<0.001$). Patient survey data was analyzed with independent t-test and showed

significant increases in three questions. “How accurately did the whiteboard reflect your personal goal for this hospital stay” increased from a mean score of 3.24 to 4.53 (p<0.001). “How do you feel staff addressed your daily goals” increased from a mean score of 4.16 to 4.71 (p=0.008). “How do you feel the nurse collaborated with you concerning daily goals” increased from a mean score of 4.20 to 4.76 (p=0.008). Nurse surveys reported degree of satisfaction with prompting daily goals with a mean score of 3.57 (SD 0.738), likeliness to prompt goals with a mean score of 3.60 (SD 0.843), and reported willingness to continue to ask patients about their daily goals in the future with a mean score of 3.90 (SD 0.876).

Conclusion: This improvement project displayed an increase in whiteboard documentation and patient perceptions of accurate goal reflection, staff addressing goals, and nurse collaboration regarding daily goals. Nurses rated prompting of patient goals, with a survey range of 1 (low satisfaction) to 5 (high satisfaction) in the moderate range, which provides room for continued improvement and education regarding goal communication in the hospital. This quality improvement project lays the groundwork for future studies and investigations related to eliciting patient preferences and setting patient goals.

Promoting Patient Preferences Through Nurse-prompted Elicitation of Daily Goals:

A DNP Scholarly Project

Introduction

Patient preference is an important aspect of care that allows for interprofessional teams to tailor interventions and plans in a way that improves patient experience and satisfaction. Unfortunately, patient preference is overlooked at times. When organizational structures are placed to elicit patient goals and preferences, they are not always effectively implemented in practice. The purpose of this project was to improve documentation of daily goals through nurse prompted communication with patients. The framework of Plan, Do, Study, Act (PDSA) was utilized for the implementation of this intervention. The aim of this project was to answer the following; does a nurse-prompted daily goals of care assessment improve documentation of goals, impact patient perception of care and impact nurses' satisfaction and perceived barriers to prompting goals?

Theoretical Framework

The Plan Do Study Act (PDSA) framework was utilized (Figure 1). This is a cyclical process to evaluate a change that is part of the Institute for Healthcare Improvement Model for Improvement (Institute for Healthcare Improvement, 2016). It consists of planning a change or intervention, implementing the change, analyzing results, and refining the change.

Theoretically, the relationship-based care model also provided a relevant context for this project. The relationship based care model (Figure 2) was developed by Creative Health Care Management; Mary Koloroutis being the co-creator, author, and editor of *Relationship-Based Care: A Model for Transforming Practice.* The model expanded on Marie Manthey's concept of primary nursing. It was designed to strengthen relationships between the care provider and

patients, families, colleagues, and self (Koloroutis, 2004). Relationship-based care implies that people and relationships are of the greatest importance and effective care delivery systems are those designed with the patient always held in the highest regard (Koloroutis, 2004). This theory allows for a patient-centered care delivery, which rests on the elicitation and integration of goals from the patient's perspective. This was the focus of this scholarly project.

Review of the literature

A number of protocols and best practice guidelines exist that highlight the importance of extracting patient goals of care to improve both the patient experience and physical care (Table 1). However, guidelines are not always translated effectively into practice. There are often gaps between patient and provider perceptions, as well as a lack of initiating crucial patient-centered conversations (Table 3 and Table 4). A literature review was conducted to identify the evidence regarding the following question: does a nurse-prompted daily goals of care assessment improve documentation of goals, impact patient perception of care, and impact nurses' satisfaction and perceived barriers to prompting goals?

Search Methods

Literature was systematically reviewed from January 1, 2012 to April 23, 2016 to ensure current data (Figure 3). Five databases were searched (OVID Medline, CINAHL, Cochrane, PubMed, and Web of Science). The inclusion criteria were: 1) Study population of human adults; 2) systematic review, metanalysis, RCT, cohort, or cross-sectional study; 3) US and non-US studies; 4) studies written in English. The exclusion criteria were: 1) pediatric studies 2) case studies. A summary of the search procedures is provided in Figure 1. Medline was searched using the mesh heading "Patient Care Planning" as well as keyword "goals of care" AND "inpatient," yielding 74 articles, which was narrowed to 20 articles by title search. CINAHL was

searched using keyword “goals of care” yielding 60 articles, which was further narrowed to 14 articles by title search. Cochrane was searched using “goals of care” yielding 25 articles and “patient care planning” yielding 5 articles. Title search of Cochrane yielded 6 articles, including one systematic review. PubMed was searched with terms “goals of care” AND “inpatient” yielding 29 articles, which was narrowed to 8 by title search. Finally, Web of Science was searched with keyword “goals of care” yielding 368 articles, which was narrowed 299 by limiting to articles and reviews, and further limited to 45 articles by title search. Eleven duplicates were removed from the remaining articles, providing a total of 82 articles for abstract review. A review of the abstracts resulted in a total of 26 articles for full review. Based on the pertinence of the article to the literature review question, 19 articles were selected for this literature review. The ancestry of pertinent articles was hand searched in order to identify additional studies. One additional study was included.

Additionally, a subtopic relating to daily patient goals was searched using five databases (OVID Medline, CINAHL, Cochrane, PubMed, and Web of Science). For all databases the term “daily goals” was searched as a keyword. The inclusion criteria were: 1) Study population of humans; 2) systematic review, metanalysis, RCT, cohort, or cross-sectional study; 3) US and non-US studies; 4) studies written in English. The exclusion criteria were: 1) case studies 2) studies analyzing daily goal of team. Searches were limited to studies within the last five years. A total of 82 studies were found upon initial search (Ovid medline 18 studies, pubmed 13 studies, CINAHL 14 studies, and Web of Science 37). Title search narrowed this down to 44 studies (OVID medline 8, pubmed 5, CINAHL 12, Web of Science 19). A total of 16 duplicated items were removed, leaving 28 articles for further review. Abstract evaluation eliminated 20 additional studies, leaving 8 articles for full review. A total of 3 studies were found to be relevant

to the literature review with regards to daily goals of patients.

A total of 20 studies were selected for this review of the literature, consisting of five Protocol/framework reviews (Table 1), three systematic reviews (Table 2), two studies evaluating gaps in communication (Table 3), three studies with factors associated with engaging in goals of care discussions (Table 4), four evaluations of staff education (Table 5), and three studies about daily goals (Table 6).

Frameworks and Protocols

Due to the importance of goals of care discussions, a number of frameworks and protocols have been developed. Table 1 provides a summary of framework and protocols found in this literature review. The American College of Critical Care Medicine and American Thoracic Society Ethics and Conflict of Interest Committee (Kon, Davidson, Morrison, Danis, & White, 2016) developed a policy statement with regards to goals of care discussions endorsing six recommendations: 1) shared decision making is a collaborative process that allows patients (surrogates) and clinicians to make healthcare decisions together, taking into account scientific evidence and patient value/goal/preferences 2) clinicians participate in shared decision making to define overall goals of care and when making major treatment decisions 3) use a process involving-information exchange, deliberation and making treatment decisions 4) a wide range of approaches are ethically supported, including patient surrogate or clinician directed models 5) clinicians should be trained on communication skills 6) research is needed to evaluate decision making strategies (Kon et al. 2016).

Sinuff et al. (2015) created a framework that highlighted advanced care planning, goals of care discussions, documentation, and the organization/system as the overarching themes of quality indicators. Within goals of care, the framework focused on whether the healthcare

provider talked about poor prognosis, outcomes, benefits, and burdens of life-sustaining treatment, comfort care; offered a time to discuss treatment options and plans, asked about prior patient discussions or written documents concerning life-sustaining treatment, asked what is important to the patient and family, and gave the patient an opportunity to express fears and concerns. The framework emphasizes the importance of goals of care discussions in ensuring quality care for patients.

Dunlay & Strand (2016) created a framework for conducting goals of care discussions that consisted of: 1) reviewing previous discussions, 2) assessing patient willingness and preferred role, 3) discussing prognosis and anticipated outcomes, 4) asking patient values, goals, fears, 5) discussing unacceptable health states, 6) discussing life sustaining preferences, 7) summarizing and make a plan, 8) complete/updating advanced directives and document conversations in electronic medical record. This framework also highlights the use of communication strategies used to understand patient perception, allow for sharing of information, and responding in an empathetic manner. Baile et al. (2000) developed the six-step SPIKES protocol used for difficult discussions with patients. The protocol consists of: 1) setting up interview, 2) assessing the patients' perception, 3) obtaining the patients invitation, 4) giving knowledge and information to the patient, 5) addressing the patient's emotions with empathetic responses, 6) strategy and summary. This protocol provides a communication based, skills-training framework that medical professionals can develop and utilize in practice.

Bernacki et al. (2014) synthesized a narrative review and recommendations relating to goals of care highlighting patient, physician, and system factors contributing to these discussions. These authors concluded that a delay in discussions leads to poorer outcomes. The best practice guideline developed during this study included the following processes: 1) train

clinicians, 2) identify patients at risk, 3) develop triggers for discussions, 4) use a checklist or conversation guide, 5) provide structured documentation, 6) measure performance. The guideline also highlighted the importance of addressing 1) understanding of prognosis, 2) decision making preferences, 3) prognostic disclosure, 4) patient goals, 5) fears, 6) acceptable function, 7) trade-offs, 8) family involvement.

These protocols all highlight the importance of including the patient as a central participant in determining the plan of care. They also highlight the importance of communication with patients and addressing their needs. This has implications for how professionals should actively involve patients and families in planning care and making treatment decisions.

Systematic Reviews

Three systematic reviews were relevant to this project. Coulter et al., (2015) conducted a Cochrane review to assess the effects of personalized care planning for adults with long-term health conditions. Nineteen RCTs evaluated interventions designed to promote patient involvement in identifying their own goals, determining priorities, and developing plans collaboratively with clinicians. The review concluded that considering patient preference and planning lead to improvements in physical health, psychological health, self-management capabilities and health behaviors of patients. The review also concluded that personalized care planning for individuals with chronic conditions, is a promising way of improving health outcomes (Coulter et al., 2015).

Two reviews focused on the advanced care planning aspect of patient preferences. Brinkman-Stoppelenburg et al. (2014) conducted a review that sought to understand effects of advanced care planning and gain insight on effectiveness of types of patient care planning. The review concluded that advanced care planning improves quality of patient care as well as

decreases hospitalizations. Austin et al. (2015) conducted a review to assess tools for advanced care planning for future patient treatment decisions. This study described how decision tools increase patient knowledge, improve documentation, clinician decisions, and treatment options. The review concluded that although more studies are needed, advanced care planning positively effects quality of patient care.

Gaps in Communication about Patient Goals and Preferences

Although patient preference is known to be an important aspect of care, there are gaps in communication between health care providers and patients. Two studies (Table 3) emphasize these gaps in communication. An observational project conducted by Collins et al. (2014) found after four 2-4 hour observations in the MICU and three 2-4 hour observations in the Oncology Unit setting, patients and families were not actively engaged in rounds discussions and rarely were patient preferences elicited. This study concluded that nurses and physicians were documenting in silos; showing a lack of consistency and communication among interprofessional teams regarding patient preference. The findings highlight that although patient centered care is best practice and the goal of many hospitals, there are still gaps in implementation of this practice.

Ahluwalia et al. (2013) analyzed recordings of physicians speaking with patients to identify where goals of care discussions took place. There were 71 visits recorded consisting of 52 different patients. Since only six of 25 instances addressed the issue of advanced directives, the study concluded that physicians were rarely engaging in fundamental discussions of advanced care planning. This again highlighted the communication gap between healthcare staff and patients.

Factors impacting Goals of Care Discussions

There are various articles that explore the numerous factors and barriers impacting goals of care discussions (Table 4). Ordons et al. (2016) conducted a thematic analysis of five focus groups with Internal Medicine trainees and a series of interviews with clinical faculty in Canada, to identify the cause of these barriers. The study concluded that inadequate preparation, disconnect between trainees/faculty/patients, documentation policies, post grad medical education structure, and resource limitations, all lead to missed opportunities, uncertainty and emotional distress.

Back et al. (2014) asked 37 patients and 20 family members to listen to simulated discussions of physicians with a standardized patient about goals of care relating to inability to prescribe further chemotherapy. Semi structured qualitative interviews allowed patient and families to comment about what they did and did not like about the oncologists' communication. These participants described how goals of care discussion required disruption of patient expectations, offering actionable response to disruption, and acknowledging death is closer but allow for "living forward." The study described the patient and family perspective of confusion and disruption that can take place during goals of care discussions and highlighted the need for health care teams to communicate effectively with patients.

Ordons et al. (2015) conducted a thematic analysis of a survey composed of open and closed-ended questions administered to healthcare professionals in thirteen centers in Canada, to explore factors that impacted goals of care discussions. Major themes identified were 1) patient and family factors-advanced illness was a trigger to initiate goals of care (GOC) and identify decision makers 2) communication between health care provider and patient-identified timing, content, process and continuity of communication as mechanism to improve GOC discussions 3) interprofessional collaboration-consistency of communication, role clarity, and documentation 4)

education-educating public, families, patients and providers about ACP and GOC 5) resources-directing resources towards facilitating GOC, documentation, personnel, physical space, organizational support. This study revealed areas where improved communication among patients and healthcare staff and shared decision-making about medical interventions may close the gap between care being provided and care that is desired by patients.

Staff Education and Training

There were four relevant improvement projects focused on staff education regarding communication skills for goals of care discussions (Table 5). Milic et al. (2015) conducted a quality improvement project where 82 nurses were provided role play scenarios to develop communication skills relating to goals of care discussions. Survey results demonstrated that 92% agreed or strongly agreed that their participation in the workshop improved their ability to ensure that patients, families and providers communicated about prognosis and goals of care. Coyle et al. (2015) conducted a study with 247 nurses that demonstrated a communication workshop composed of goals, strategies, skills, and process tasks significantly increased nurse confidence in discussing death, dying, and end-of-life goals of care.

Epner and Baile (2014) incorporated an hour of communication skill based teaching into a monthly medical residents meeting, which was evaluated favorably by medical residents as measured by an optional anonymous Internet survey. Yuen et al. (2013) also provided medical residents with communication based learning experiences, which revealed significant improvement in resident comfort level with ICU communication, as well as a better understanding of patient perspective and goals. These findings support the positive effect of nurse and physician education on their skill and confidence in eliciting goals of care from patients and families.

Interventions to Improve Goal Elicitation and Patient Satisfaction

Eliciting patient daily goals was the specific focus of three articles (Table 6). Revello & Fields (2015), performed a quality improvement study that focused on whether an educational intervention for nurses improved identification of patient daily goals. The hospital already endorsed patient daily goals, however, an audit of white boards showed low or inconsistent utilization. Therefore, an educational intervention for nurses was developed. The study used SMART (Specific, Measurable, Attainable, Relevant, and Timely) goal evaluation as a strategy for nurses to develop daily goals with patients. Nurses attended 30 minute educational sessions at the start or end of their shift. Pre intervention data showed 11% of the patient whiteboards had goals, 37% of patients had the ability to articulate goals, 20% patient felt that the nurse collaborated on goals, and 57% of patients felt that they are well informed by nurses and physicians. At four months, 63% of patient whiteboards showed goals, 67% of patients could articulate goals, 67% of patients felt that the nurse collaborated on goals, and 91% of patients felt that they are well informed by nurses and physicians. Overall, this study showed that the nurse educational intervention increased whiteboard documentation, articulation of goals, nurse collaboration concerning goals and patients felt more informed by nurses.

Justice et al. (2015) described a quality improvement process, by which a write down/read back process of eliciting daily goals was implemented. This study had nurses first write daily patient goals on a white board for a three-month period, and switched to a laminated paper attached to the whiteboard for more writing space. The study found that a visual display of daily goals improved comprehension of patient goals by staff and improved patient satisfaction. After the intervention, agreement for patient goals among staff increased from 62% to 85% and patient satisfaction improved on a Likert scale of 1 (low) to 6 (high) from a mean of 4.6 to 5.7.

This quality improvement project showed that recording daily goals on a whiteboard facilitates a consistent plan of care, goal directed care, and provides health care providers with a daily list of patient goals to review.

Van de Glind et al. (2015) conducted a secondary analysis of data from a nurse-led counseling program that increasingly used goal setting. The Lively Legs program provided nurse-led education to patients with leg ulcers. Previous randomized control trial data from this program was analyzed with regards to setting daily goals. The SMART goal evaluation was used. The study found that 68% of elicited patient goals were performed in a specific, measurable, time-bound manner. The authors concluded that goal setting could be improved with setting more specific, measurable, and time bound goals and recommended regular quality checks in daily goal setting. This study showed that an improvement in the approach to eliciting and setting daily goals could improve patient involvement and care. These studies highlight impact of educational interventions on nurses' elicitation and documentation of daily goals.

Summary of Review of Literature

Eliciting patient goals of care have been shown to improve quality of care and patient outcomes. Although goals of care discussions are often cited as improving patient centered care, studies have shown that they are not always consistently performed in practice. There are gaps in communication among health care professionals, as well as between patients and health care providers (Collins et al., 2014; Ahluwalia et al., 2013). There are a number of barriers to this communication, one important factor being inadequate preparation and education in identifying and communicating patient goals (Ordons et al., 2015, 2016). This deficiency could be improved by increasing education, developing communication skills, and providing professionals with adequate tools to enhance communication.

Significant improvement in communication skills among health care professionals has been demonstrated when a communication-based training intervention was provided. Both nurses and residents have been studied with regards to communication skills workshops, which have proved to be beneficial to both professional groups. This literature review shows that patient care goals are important to consider and education is needed to improve nurses' and physicians' skills in eliciting goals from the patients under their care (Epner & Baile, 2014; Milic et al., 2015; Revello & Fields, 2015).

Although daily goals are addressed in the literature, this search revealed that many studies look at daily goals through the perspective of the interprofessional team rather than the patient. This project examined the impact of nurse prompts on documentation of goals and also measured the patient perspective of daily goals, nurse satisfaction, and perceived barriers to eliciting goals.

Study Question

Does a nurse-prompted daily goals of care assessment 1) improve documentation of goals, 2) impact patient perception of care, and 3) impact nurses' satisfaction and perceived barriers to prompting goals?

Methods

The purpose of this project was to measure the effect of nurse prompts on elicitation and documentation of patients' daily goals of care, patients' perception (or satisfaction with) patient centered care, and nurses' report of satisfaction with the process and perceived barriers to goal elicitation and documentation.

Definition of Terms

Goals of care- How the patient would like their care to look overall, their objectives,

aims, and wishes for their care in the present and future. Determining the steps in healthcare decision-making about specific treatments, intensity of care, and planning for future care needs as determined by the patient/surrogate and the health care team (LeBlanc & Tulsky, 2016).

Advanced Care Planning: According to the National Hospice and Palliative Care Organization (NHPCO), advanced care planning is "making decisions about the care you would want to receive if you become unable to speak for yourself" (2015). The National Institute on Aging (NIA) defines it as "learning about the types of decisions that might need to be made, considering those decisions ahead of time, and then letting others know about your preferences, often by putting them into an *advance directive*" (2016).

Daily goals- Objective or aim set by the patient for that specific day, this could refer to short or long term ambitions or wishes about patient care for the day.

Rounding system- An organized daily process where the interprofessional team, informed by clinical expertise, gathers to coordinate patient care, determine priorities, establish daily goals, and plan for potential transfer or discharge (IHI, 2016).

Nurse led prompt- Guide for nursing staff to ask patients about daily goals. This project will have a three question guide for nurses to elicit daily goal form patients.

Patient centeredness- Patient centered care is "care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions" in *Crossing the Quality Chasm* (IOM, 2001).

Research Design

A before and after measurement of the impact of a brief educational intervention on how nurses use prompts to improve elicitation and documentation of goals of care was conducted. Survey-based measurements of patient satisfaction, nurse satisfaction, and nurse reporting of

barriers to eliciting goals were also collected.

Sample

A convenience sample of patients on an acute cardiology unit comprised the sample. Patients on this unit had a variety of cardiac conditions with a median length of stay of four days. Fifty patients participated before the educational intervention and thirty-eight patients participated afterwards.

Inclusion criteria were as follows:

1) adult patient

2) setting of acute cardiology unit

3) English speaking

4) alert and oriented.

Exclusion criteria were as follows:

1) decreased level of consciousness or orientation

2) critical illness needing transfer to another unit or multiple road trips

3) patient refusal.

The intervention included a brief introduction to nurse prompts at a staff meeting, a PowerPoint sent to all nursing staff, and one on one follow up with nursing staff. All thirty-six nurses working on the unit during implementation were invited to take a Likert survey regarding their satisfaction with daily goal prompts and perceived barriers.

Setting

This quality improvement project was conducted on a twenty-eight bed acute cardiology unit at a university medical center in the eastern United States. The unit employed thirty-six Registered Nurses (RNs), with a baseline nurse patient ratio of 1:4 per shift. This setting used an

interprofessional rounding system for select patients on the acute cardiology and heart failure services. This consisted of a patient-centered scripted interprofessional rounds initiative where the entire team involved in the patients' care, including social work, physicians, physical and occupational therapists, nurses, pharmacists, and patient care technicians, performed morning rounds in the patient room. The nurse was responsible for identifying and reporting patient goals during morning rounding. Patients on other medical services received standard morning rounding, where physicians discussed patient plans outside of the room and asked nurses for any input at that time.

Approval from the medical director, nurse manager, and clinical nurse specialist on the study unit was obtained.

Procedures

A study of the outcomes of a nurse prompt to elicit-patient goals and promote patient centered-care was performed. Whiteboards were audited before the intervention, to measure how often patient goals were recorded. Fifty whiteboards were observed before the intervention. Patients were given a five question point-Likert survey about daily goal elicitation to determine patient perceptions of whiteboard reflection of goals and staff involvement.

Next, nurses on the acute cardiology unit received information regarding use of a three question nurse prompt aimed at eliciting patient goals (Figure 4). This intervention consisted of a brief introduction at a monthly nursing staff meeting with a fifteen-minute PowerPoint about daily goals. After this meeting, a PowerPoint consisting of the same information was emailed to all nursing staff on the unit. The project investigator completed brief five-minute one-on-one discussions with individual nurses on the floor to ensure understanding. Eighty-eight percent of the nurses on the unit received this one-on-one follow-up. The following week, nurses

implemented nurse prompting of patient goals, incorporated these goals into rounding, and listed them on the patient whiteboards.

One-month after the educational intervention, thirty-eight whiteboards were audited for daily goals documentation. A convenience sample of thirty-eight patients were given the same daily goals survey as before the intervention. A nurse survey was also emailed to staff one month after the educational intervention concerning satisfaction with the nurse-led prompts and perceived barriers. Ten nurses (29.4%) returned the survey.

Protection of Human Subjects

An application for Health Sciences IRB approval was submitted for review. The Institutional Review Board for Health Science Research (IRB-HSR) at the medical facility deemed the project to be quality improvement; not meeting the criteria of research with human subjects or clinical investigation. Therefore, full IRB-HSR review was not required. Permission was also received from the medical director, nurse manager and the clinical nurse specialist on the unit verbally and via email for the project investigator to conduct the project on their unit.

Prior to patient interviews, a brief explanation as well as patient rights was described to each patient and verbal consent was obtained. Surveys also stated that completion of survey served as the patient's consent to participate. No names or signatures were collected to ensure anonymity.

Potential risks to patients included stress due to participation in the interview or identification of and need for medical care during the interview. Stress was minimal due to the nature of the interview questions, as patients were solely asked whether their goals were achieved and listened to. Participation was voluntary and confidentiality of data was maintained. Data were anonymous which means that names were not collected or linked to the data. Possible

identifying information collected for patients was age and length of hospital stay. Possible identifying information collected for nurses was age, gender, years of experience, and prior End-of-life nursing education consortium (ELNEC) or communication training. ELNEC is a national education initiative that provides training in palliative care. Because of the nature of the data, it may be possible to deduce identity; however, there was no attempt to do so and data were reported in a deidentified way.

Measures

Whiteboard goals. The whiteboard is a communication tool in each patient room that leaves space for names of providers and a blank area for additional documentation. White boards were audited for the yes/no presence of daily goal documentation before the intervention by observation (Figure 5). After the intervention, white boards were again audited for presence of daily goal documentation. Before and after intervention data concerning whiteboard documentation of goals were compared using chi-square.

Patient survey. An investigator developed five question Likert survey, derived from Revello & Fields (2015) outcome measures, collected patient perspectives as to whether staff addressed goals. It consisted of five point-Likert style questions ranging from 1 (low satisfaction) to 5 (high satisfaction). Demographic data collected for patients was age and length of stay (Figure 6). Descriptive statistics of the sample were performed and independent sample t-tests were conducted to test for significance.

Nurse survey. An investigator developed survey collected nurses' perspectives on the satisfaction with as well as barriers to the nurse prompt intervention (Figure 7). Demographic data collected for nurses included age, gender, years of experience as a nurse, and prior ELNEC or communication training. Data were analyzed using descriptive statistics and anecdotal

findings.

Data Analysis

Data were collected in Microsoft Excel and were analyzed using IBM SPSS Statistics (version 24) software. Chi square was performed on nonparametric data and independent t-test was performed to compare groups. A statistician reviewed findings for accuracy and appropriateness.

Results

Whiteboard Goals

Observed whiteboard documentation of patient daily goals increased from 26.0% to 68.4% (Figure 8). Chi-square analysis showed a statistically significant increase in whiteboard goal documentation ($p<0.001$).

Patient Survey

Demographic data for the before patient group (n=50) consisted of a mean age of 65.20 (SD 14.033) and a median length of stay of 4 days (IQR 5) with a range of 1 to 81 days. The after patient group (n=38) consisted of a mean age of 63.82 (SD 12.565) with a median length of stay of 4 days (IQR 5) ranging from 1 to 60 days. There was no significant difference in age or length of stay between groups (Table 7). There was also no difference found in the white board documentation of patient survey data for patients in the interprofessional rounding group versus standard rounding processes. The interprofessional rounding group consisted of before (n=30) and after (n=22), while the standard rounding group consisted of before (n=20) and after (n=16).

Survey data was statistically analyzed with independent t-test and showed statistically significant increases in three questions (Table 8). Survey data scores were based on Likert scale range of 1 (low satisfaction) to 5 (high satisfaction). “How accurately did the whiteboard reflect

your personal goal for this hospital stay" increased from a mean score of 3.24 to 4.53 (p<0.001). "How do you feel staff addressed your daily goals" increased from a mean score of 4.16 to 4.71 (p=0.008). "How do you feel the nurse collaborated with you concerning daily goals" increased from a mean score of 4.20 to 4.76 (p=0.008).

Although the remaining two survey questions did not show a statistically significant increase, there was an increase in mean score. "How meaningful was addressing daily goals to you" had a mean increase from 4.02 to 4.39 and "How involved in your care do you feel" had a mean increase from 4.40 to 4.68.

Nurse Survey

Nurses surveyed (n=10) had a mean age of 36.50 (SD 10.650) and a mean years of experience of 5.11 (SD 9.070). Of nurses surveyed, 30% reported having additional communication or ELNEC training.

Survey data scores were based on Likert scale range of 1 (low satisfaction) to 5 (high satisfaction). Nurses reported degree of satisfaction with prompting daily goals with a mean score of 3.57 (SD 0.738), likeliness to prompt goals with a mean score of 3.60 (SD 0.843), and reported willingness to continue to ask patients about their daily goals in the future with a mean score of 3.90 (SD 0.876).

Anecdotal Findings

Anecdotal patient comments were collected during the post survey. Themes included inability to see the whiteboard and stating that the boards are extremely informative and useful, but they were not asked about personal goals. One patient stated, "they have outlined my plan of care and put very important information on the board, now my goals they did not ask". Other patients were extremely pleased with the care, felt informed, and that their goals were addressed.

Nurses felt that barriers to goal prompting consisted of patients not having a goal, busy shifts, lack of patient understanding, and lack of board space. Nurses stated that goals may not be beneficial for everyone, there is a need for further standardization, and that the goals section of the whiteboard should be highlighted and used more.

Discussion

This improvement project demonstrated that nurse prompts increased the documentation of daily patient goals and improved patient's perception that care was based on those goals. After the educational intervention at the monthly staff meeting, PowerPoint, and one on one follow-up, more whiteboards showed documentation of goals and patient perceptions of staff and nurses collaborating concerning goals increased. There was a one-month gap between the intervention and the second round of data collection, with statistically significant results, showing that daily goal prompting was retained and did impact patients' perceptions of the process. Consistency in the educational intervention allowed for a framework and reminder to nurses to elicit patient goals.

Patients rated daily goals highly as being meaningful at baseline and many stated how important goals were as a part of hospital care. Justice et al. (2016), described how visual display and read back of patient goals improved comprehension of goals by the team and families. This improvement project provided for an increase in documentation of goals on whiteboards, but more importantly it showed an increase in patient perception that the whiteboards adequately reflect daily goals. This provides evidence that nurses were adequately discussing patient goals and were communicating sufficiently about actual patient preferences. Patients felt their goals were acknowledged. It also provided for increased documentation, allowing for all team members to see displayed patient goals in the room.

This particular floor held patients with providers on a variety of patient care teams (acute cardiology, critical care, heart failure, general medicine, etc.). There was a patient centered scripted interprofessional rounds initiative on some of the cardiac teams, which may have impacted patient perception of care for those individuals. However, nursing staff remained constant among all patients on the unit, regardless of physician team. Statistical analysis showed that there was no significant difference in patient survey scores between groups, which shows that nurse prompted goals were impactful regardless of rounding teams.

Interestingly, one point made by a number of patients was that they have been well informed about their care, but were not asked about their patient specific goals. A similar trend occurred throughout the review of literature; where many articles addressed team goals and plans but neglected to focus on patient perspectives. This is an area of care that needs to be addressed and further studied due to the importance and shift in healthcare focus towards patient centered quality care.

Nurses reported a moderate level of confidence that they will continue nurse-led prompts to elicit patient goals and still believe there are many barriers to eliciting patient daily goals. This provides room for continued improvement and education of staff in the future. Although nurses have busy shifts and patients may not understand what a daily goal means, nurse-patient communication is an important skill that should be incorporated in all aspects of nursing care. Daily goal elicitation is a foundational practice to improving patient-family centered care.

Limitations

Two hospital wide initiatives relating to comfort rounding and whiteboards were introduced during the same timeframe that this project was implemented, providing for possible confounding variables. Comfort rounding consisted of a staff member checking on patients

hourly to ensure that patient needs were being met. The hospital also received new whiteboards for patient rooms that had sections for the date, staff names, plan and goals. These initiatives may have had an impact on patient preference and satisfaction as well as whiteboard usage.

A limitation of the nurse education portion of this project, was the number of nurses in attendance at the staff meeting during which the education occurred. There were only ten out of 36 nurses in attendance. This was addressed by modifying teaching to include one-on-one follow-up with nursing staff. The nurse survey was also distributed around the same time that second set of data was collected, which could have served as a reminder for nurses to elicit patient daily goals.

Limitations of the patient survey consisted of limited demographic data to compare, only age and length of stay were collected. There was also a possible ceiling effect, as the before intervention data already had fairly high scores. Therefore, it would be more difficult to achieve a large enough increase to have statistically significant results.

Nursing Practice Implications

This project is in alignment with hospital goals to improve patient centered care, satisfaction, and nicely complements the objectives of the pre-existing comfort rounding and whiteboard usage initiatives at the medical center. The unit receiving the intervention had already listed daily goals as an important part of daily rounding, but it was not previously implemented in a consistent way. This project provided for additional education and strategy for nursing staff to consistently achieve this aspect of patient care. The described patient experience may provide a rich source of information for clinicians to inform the provision of care. Nurse prompting aimed at eliciting patient goals, may be generalized to other units throughout the health system, as it is not a diagnosis specific aspect of care.

Eliciting patient preference and goals are the cornerstone of patient centered care. This study could provide insight to the patient perspective of how nurses listen to their concerns and goals. It has the potential to impact the way that nurses address patient goals as well as impact the comfort nurses have with bringing up goal discussions. It may also impact how nurses feel they are advocating for the patient and contributing to the interprofessional team.

Listening to patient goals and following their wishes may contribute to minimizing unnecessary or unwanted diagnostics, procedures, and care (Ha & Longnecker, 2010). Catering healthcare to the patients' goals can improve the health status from the perspective of the patient. Understanding the patient's goal will also allow staff to recognize factors that may impact how patients take care of themselves and perceive their own health. Communicating with patients about their wishes is ultimately a part of care coordination; with trickle down policy implications regarding transitions through the healthcare system, decreased length of stay, and decreased readmissions (The Joint Commission, 2012).

Future Recommendations

This study showed that education of nurses regarding communication of patient goals is beneficial and should be increased. Adequate communication and patient input are key to patient-centered care. Therefore, more initiatives relating to patient goal elicitation throughout this healthcare system should be considered. These initiatives could focus on standardization of goal prompting, setting a specific time to ask about goals throughout the shift. Nurse champions could also be selected on the unit to focus on encouraging education and patient goal elicitation.

Future studies should be conducted to further highlight the patient perspective of goal elicitation and the hospital experience, rather than solely the team's perspective. A qualitative approach may explore themes in patient and nurse perceptions of goal communication in a

deeper way. This is an area with many opportunities for further investigation and improvement for the enhancement of patient-centered care.

Conclusion

This improvement project consisted of an educational intervention to improve nurses' consistency in eliciting daily patient goals and documenting on whiteboards. Findings of the project were an increase in whiteboard documentation and patient perceptions of accurate goal reflection, staff addressing goals, and nurse collaboration regarding daily goals. Nurses rated prompting of patient goals moderately, which provides room for continued improvement and education regarding goal communication in the hospital. This quality improvement project lays the groundwork for future studies and investigations related eliciting patient preferences and setting patient goals.

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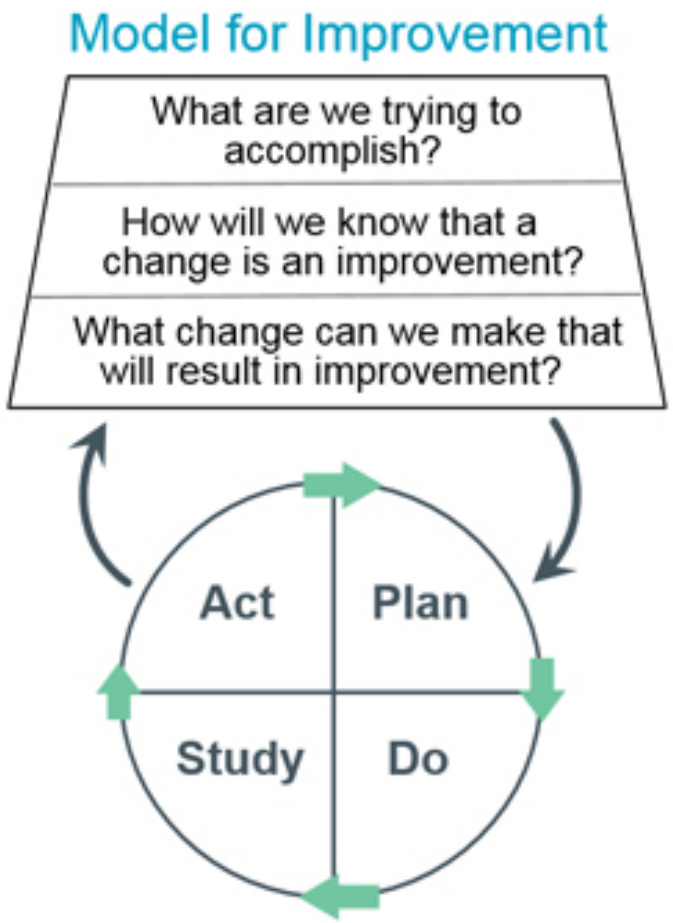

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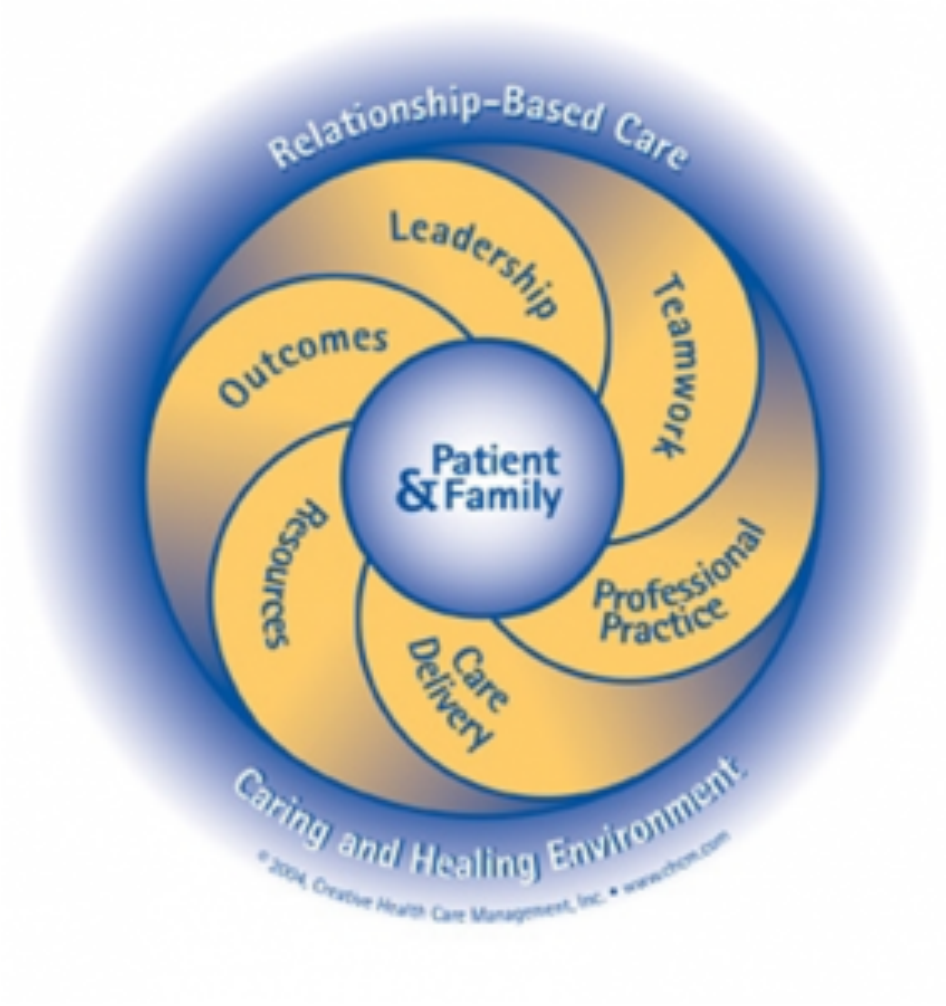

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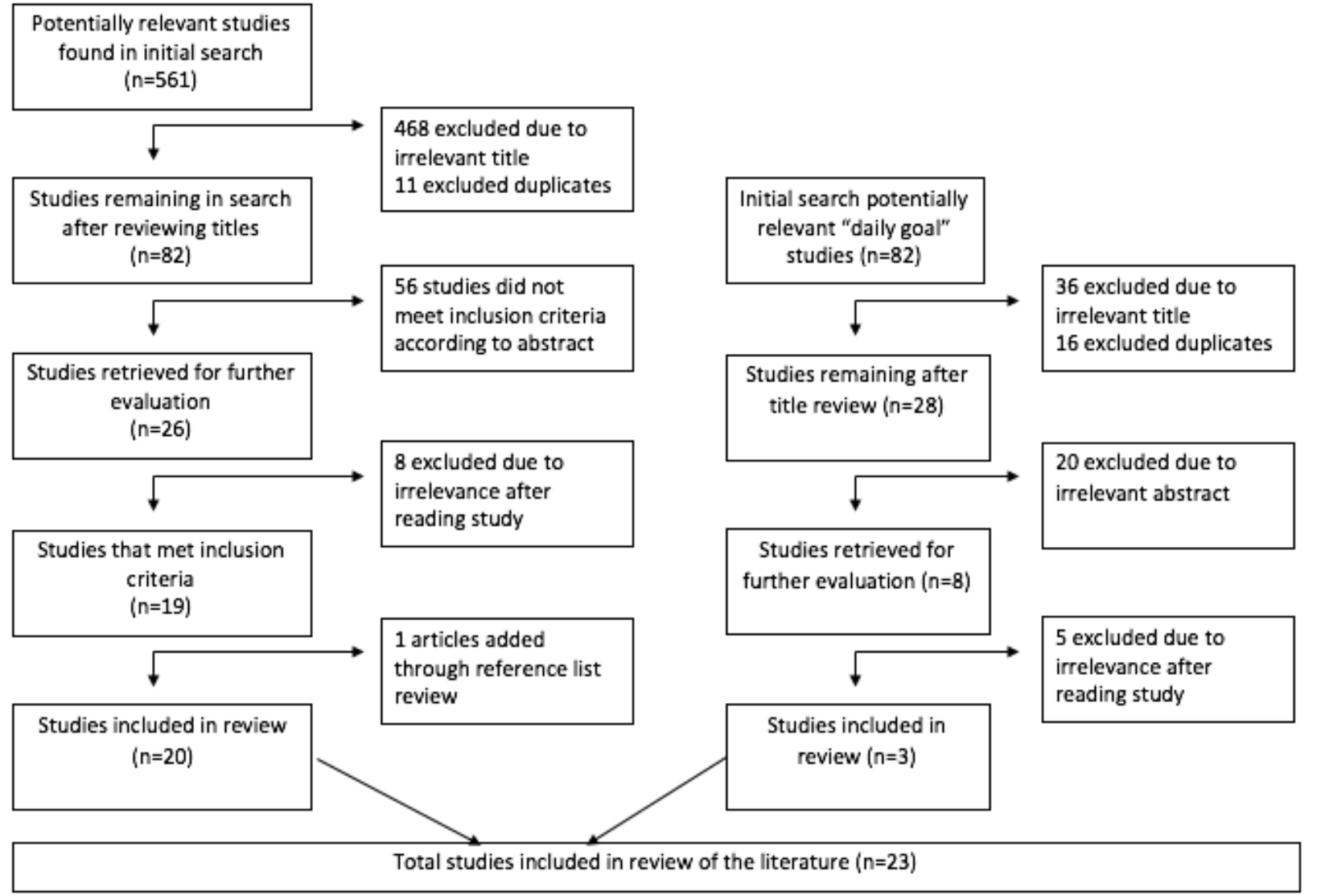

Figure 3. Flowchart of review of literature method. Developed by Michelle Erli.

I. Importance of goals discussions-why ask about daily goals

II. SMART goals

III. Questions to ask patients:

   a. What is your goal for today?

   b. What is your goal for leaving the hospital?

   c. How can I help you work towards achieving your goal today?

IV. Documentation on whiteboard

Figure 4. Topical outline of information provided to nurses during staff meeting and in PowerPoint emailed to staff. Developed by Michelle Erli.

Daily Goal Documented?	Yes	No
Interprofessional Rounding?	Yes	No

Figure 5. Whiteboard Data Collection Sheet. Developed by Michelle Erli.

Age _____

Days in Hospital _____

Please answer the following questions on a scale of 1 (low)-5 (high).

1) How accurately did the white board reflect your personal goals for this hospital stay?

1 2 3 4 5

2) How do you feel that staff addressed your daily goals?

1 2 3 4 5

3) How meaningful was addressing daily goals to you?

1 2 3 4 5

4) How do you feel the nurse collaborated with you concerning daily goals?

1 2 3 4 5

5) How involved do you feel in your care?

1 2 3 4 5

Figure 6. Patient Survey. Developed by Michelle Erli. Adapted with permission from Revello & Fields (2015) patient survey questions.

Age: _____
Gender: M/F
How many years have you been a nurse? _____
Have you received prior ELNEC or communication training? Yes/No

Please answer the following questions on a scale of 1 (low)-5 (high).

1.) How satisfied are you with prompting patient daily goals as part of nursing care?

1 2 3 4 5

2.) How likely are you to prompt patients concerning daily goals?

1 2 3 4 5

3.) Will you continue to prompt patients concerning daily goals in the future?

1 2 3 4 5

4.) Where there any barriers to prompting patient daily goals? Please list:

5.) Please provide any other information relating to how daily goals impacted care or how this process can be improved.

Figure 7. Nurse Survey. Developed by Michelle Erli

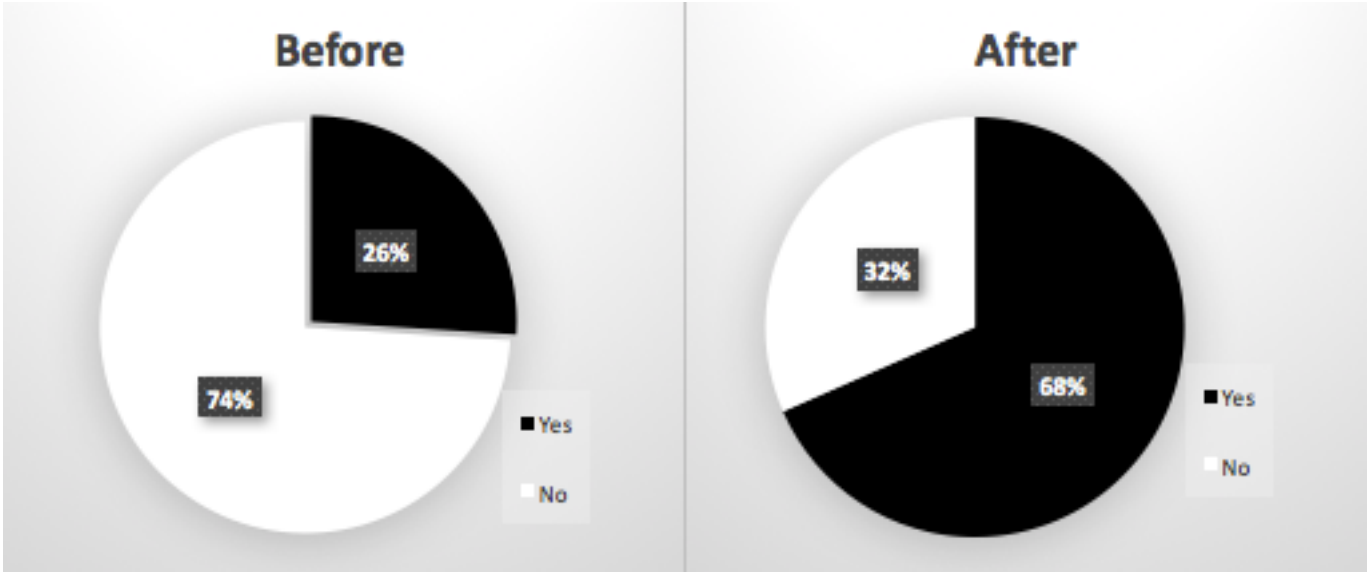

Figure 8. Whiteboard documentation observations before and after.

Table 1

Summary of Goals of Care Protocols and Frameworks

Study	Subject and Setting	Purpose	Intervention and Comparison	Conclusions
Baile et al. (2000)	N/A	Protocol	Six Steps of SPIKES 1) Setting up interview 2) Assessing the patients' perception 3) Obtaining the patients invitation 4) Giving knowledge and information to the patient 5) Addressing the patient's emotions with empathetic responses 6) Strategy and summary	99% ASCO survey found protocol practical and easy to understand
Bernacki et al. (2014)	Observational and interventional studies, and indirect evidence from high-quality studies of palliative care specialist interventions that address impact of communication about serious illness care	Narrative Review and Synthesis of Best Practice	Patient factors-emotions, expectations, preferences Physician factors-EOL communication training, timing, uncertainty about prognostic accuracy, addressing psychosocial concerns, System factors-life sustaining treatment as default, systemic approach to serious illness care planning, ambiguity about responsibility, variation in documentation	Highly consistently data shows associations between failure and delay in discussion EOL care options and poor outcomes Systematic multicomponent intervention holds greatest potential for improving serious illness care planning and is aligned with existing evidence 1) Train clinicians 2) Identify patients at risk 3) Develop triggers for discussions 4) Use a checklist or conversation guide

Study	Subject and Setting	Purpose	Intervention and Comparison	Conclusions
	planning on outcomes			5) Provide structured documentation 6) Measure performance Address: 1) understanding of prognosis 2) decision making preferences 3) prognostic disclosure 4) patient goals 5) fears 6) acceptable function 7) trade-offs 8)family involvement
Dunlay & Strand (2016)	N/A	Review/ Framework	Key Elements in GOC: 1) Review previous discussions 2) Assess patient willingness and preferred role 3) Discuss prognosis and anticipated outcomes (normalize uncertainty, use NURSE statements) 4) Ask patient values, goals, fears 5) Discuss unacceptable health states 6) Discuss life sustaining preferences 7) Summarize and make a plan 8) Complete/update advanced directives and document conversations in EMR	N/A Hope for framework to enable clinicians to feel empowered to discuss goals of care

Study	Subject and Setting	Purpose	Intervention and Comparison	Conclusions
Kon et al. (2016)	Collaborative effort of American College of Critical Care Medicine and American Thoracic Society Ethics and Conflict of Interest Committee Writing group reviewed pertinent literature PubMed and Medline databases searched	Policy Statement	N/A	Six recommendations endorsed: 1. Shared decision making is a collaborative process that allows patients (surrogates) and clinicians to make healthcare decisions together, taking into account scientific evidence and patient value/goal/preferences 2. Clinicians participate in shared decision making to define overall goals of care and when making major treatment decisions 3. Use “default” approach a process involving-information exchange, deliberation. And making treatment decision 4. Wide range of approaches are ethically supported, including patient surrogate or clinician directed models. Tailor process based on patient preference 5. Clinicians should be trained on communication skills 6. Research is needed to evaluate decision making strategies

Study	Subject and Setting	Purpose	Intervention and Comparison	Conclusions
Sinuff et al. (2015)	Multidisciplinary panel of experts to develop definitions, conceptual framework, and quality indicators using Delphi method Reviewed literature 200-2014	Conceptual Framework Development	N/A	Final list of quality indicators comprised 34 items in 4 categories of framework: 1) Advanced care planning (8 items) 2) Goals of care discussions (13 items) 3) Documentation (5 items) 4) Organization/system (8 items) Conceptual model has ACP in community setting, GOC institutional, and support for processes within health care system

Table 2.

Summary of Systematic Reviews

Study	Databases	Purpose	Substance	Conclusions
Austin et al. (2015)	Systematically searched PubMed, CINAHL, and PsychInfo from 1995-2014 Published nonrandomized clinical trials and RCTs that test decision tools intended for use by patients and their caregivers 38 articles met inclusion criteria (17 RCTs, 21 trials)	Tested tools for advanced care planning for future decisions (addressed ACP, palliative care ,and goals of care communication, feeding options in dementia, lung transplant in CF, and truth telling in terminal cancer), tools to support immediate treatment choices	17 randomized clinical trials showed decision tools improve patient knowledge and awareness of treatment choices 5 randomized clinical trials provided further evidence that decision tools improve ACP documentation, clinical decisions, and treatment received	Decision tools clearly improve patient knowledge and preparation for treatment choices, including ACP, palliative care, and goals of care communication, feeding options in dementia, lung transplant in cystic fibrosis, and truth telling in terminal cancer. Clinicians can use evidence based tools to engage in shared decision making. Future research is needed to develop decision aids
Brinkman-Stoppelenburg et al. (2014)	Systematically searched PubMed, EMBASE, and PsychInfo for experimental and observational studies on effects of advanced care	Overview of studies on the effects of advanced care planning and gain insight on effectiveness of different types of advanced care planning	Advanced care planning often found to decrease life sustaining treatment, increase use of hospice and palliative care and prevent	Effects of advanced care planning have been studied in a variety of settings with a variety of outcomes.

Study	Databases	Purpose	Substance	Conclusions
	planning published 2000-2012 113 relevant studies observational (95%), US (81%), in hospital (48%), nursing home (32%), DNRs (39%), advanced directives (34%)		hospitalization. Complex advanced care planning interventions increase compliance at patient end of life	Advanced care planning positively impacts the quality of end of life care. Complex ACP interventions may be more effective than written documents More studies needed
Coulter et al. (2015)	Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycINFO, ProQuest, clinical- trials.gov and WHO International Clinical Trials Registry Platform to July 2013 19 studies involving a total of 10,856 participants	Patient care planning (A collaborative process in which patient and clinician discuss treatment or management goals and agree a plan for tackling these) "To assess the effects of personalised care planning for adults with long-term health conditions compared to usual care (i.e. forms of care in which the active involvement of patients in treatment and management decisions is not explicitly	"personalised care planning (as we defined it) has been assessed in a relatively small number of randomized controlled trials. We found 19 trials that fitted our definition; in other words, they had evaluated interventions designed to encourage and support patients to play an active role in identifying their own goals, determining priorities, and developing plans collaboratively with clinicians." "Fifteen out of the 19	involvement in personalized care planning probably led to small improvements in some indicators of physical health It also probably reduced symptoms of depression, and improved people's confidence and skills to manage their health. We found no evidence of any harms arising from personalized care planning. We found that the process worked best when it included

Study	Databases	Purpose	Substance	Conclusions
		attempted or achieved)" primary research questions: • is personalized care planning effective for improving physical health? • is personalized care planning effective for improving psychological health? • is personalized care planning effective for improving subjective health status (or health-related quality of life)? • is personalized care planning effective for improving people's capabilities for self-managing their condition? We also looked for evidence to address the following secondary research questions: • is personalized care planning effective for improving people's health-related behaviors?	studies reported positive effects for at least one outcome measure" "We found moderate-quality evidence that personalised care planning leads to improvements in physical health, psychological health, self-management capabilities and health behaviors"	preparation, record-sharing, care co-ordination and review, involved more intensive support from health professionals, and was integrated into routine care. "Our review suggests that personalised care planning to identify patients' needs for clinical care and self-management support offers promise as an effective way of improving health outcomes for people with long-term conditions" "We concluded that personalized care planning is a promising approach that offers the potential to provide effective help to patients, leading to better health outcomes"

Study	Databases	Purpose	Substance	Conclusions
		• how does personalised care planning impact on rates of use and costs of formal health services? • what is the relative effectiveness of different types of intervention used to promote personalised care planning?		

Table 3.

Summary of Gaps in Communication Articles

Study	Subject and Setting	Study Design	Intervention and comparison group	Evaluation	Outcomes
Collins et al. (2014)	4 observations in MICU 3 observations on Onc Unit (observed nurses, residents, Pas, attendings, fellows, charge nurses. Staff nurses, pharmacists, patients, and families) MICU and Oncology Unit at large academic medical center in Northeastern United States Focused on nurse and physician engagement with plan of care activities	Quality Improvement (observational)	Observations (2-4hr long) of workflow done by 2-5 study investigators (2 nurse, 1MD, 2 research assistants)	Field notes taken followed by group semi-structured interviews with 1-7 clinicians RE-AIM (reach, effectiveness, adaptation, implementation, maintenance) framework	Nurses and physicians document in silos even though they engage in shared formal conversations during rounds Patients and families were not actively engaged in rounds discussions, rarely were discussions of patient preference done(except for code status)
Ahluwalia et al. (2013)	71 audio recorded and transcribed outpatient visits with 52 patients >65 yrs old recently hospitalized for HF and their physicians (n=44)	Qualitative content analysis (prospective observational cohort)	Observational study seeking whether Physicians "intervene" with ACP discussions	Coding for: a) explaining nature and course of HF b) eliciting patient preferences c) encouraging documentation of patient preferences	25 instances of ACP-related communication over 15 of 71 visits Physicians discussed goals of care in 6 instances, eliciting patient

Study	Subject and Setting	Study Design	Intervention and comparison group	Evaluation	Outcomes
	patients hospitalized for HF at two Veteran Affairs Medical Centers				preferences in only 2 Physicians are rarely engaging fundamental elements of ACP discussions

Table 4.

Summary of Factors Impacting Goals Of Care Discussions

Study	Setting and Subject	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
Back et al. (2014)	N=37 patients with metastatic GI cancer N=20 bereaved family members	Semi structured Qualitative Study	Intervention-participants listened to audio recordings of oncology fellows instructed to discuss transition in goals of care with a standardized patient for which chemo was no longer an option	Participant comments on feedback they liked/disliked about oncologist communication analyzed	GOC discussion required disruption of patient expectations, offering actionable response to disruption, and acknowledging death is closer but allow for "living forward"
Ordons et al. (2015)	13 centers in 6 Canadian provinces n=1256 to large survey n=468 responded open-ended questions (272 nurses, 153 internal medicine trainees, 43 attendings)	Cross-sectional Qualitative Study	Cross-sectional survey composed of closed and open ended questions about goals of care communication and decision making	Thematic content analysis of open ended questions	Five themes emerged: 1) patient and family factors-advanced illness was a trigger to initiate GOC and identify decision makers 2) communication between health care provider and patient-identified timing, content, process and continuity of communication as mechanism to improve GOC discussions 3) Interprofessional collaboration-consistency of communication, role

Study	Setting and Subject	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
					clarity, and documentation 4) education-educating public, families, patients and providers about ACP and GOC 5) resources-directing resources towards facilitating GOC, documentation, personnel, physical space, organizational support
Ordons et al. (2016)	Five focus groups with internal medicine trainees (n=20) and interviews with clinical faculty (n=11) Canada	Exploratory Qualitative Study	Observational	Thematic framework analysis	Challenges and factors enabling GOC conversations emerged within individual, Interprofessional, system dimensions Inadequate preparation, disconnect between trainees/faculty/patients, documentation policies, post grad medical education structure, resource limitations-all lead to missed opportunities, uncertainty and emotional distress

Table 5.

Summary of Staff Education and Training

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
Coyle et al. (2015)	N=247 Inpatient nurses working in oncology setting at MSKCC (acute care n=169, pediatrics n=39, critical care n=25, and urgent care n=14) average 12 nurses per session 2012-2014	Pre/post study	Intervention: training modules developed based on Comskil Conceptual Model, communication composed of goals, strategies, skills, and process tasks Adaptation of Discussion Death, Dying, and Endo of Life Goals Of Care a) systematic lit review b) consensus review meetings c) modular blueprint development d) training methods development e) scenario development	8 statements about workshop on a 5pt Likert scale retrospective pre/post method relating to: a) before this module I felt confident discussing death dying, and EOL goals of care b) now that I have attended this module, I feel confident discussing death, dying and EOL goals of care	paired sample t-test revealed confidence increased significantly before (X=3.09, SD=1.03) and after (X=4.07, SD=0.69) they attended (t246=-18.66, p<0.001)

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
			f) revisions and adaptations g) assessment of training module Modular blueprint: establish relationship, develop accurate shared understanding of patient situation, support patient/families following MD discussion of death/dying/EOL goals, respond empathetically to patients emotional response, close the conversation		
Epner & Baile (2014)	First year medical oncology fellows at MD Anderson Cancer center from 2012-2012 N=12 first year N=14 second year (17 men, 9 women) all received 4 years medical school and 3 year medical residency prior to study	Course pilot	One hour each month of "Academic Tuesday" was dedicated to communication skills training Case based role play techniques, group discussion, and reflective writing	Anonymous internet survey midway through first year and end of both years Reflective writing experiences (last class write 15 words about most compelling lesson)	Responses uniformly favorable Theme desire to focus on practice

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
				Post survey assessing 6 items relating to key skills (eliciting patient narrative and responding to emotions)	
Milic et al. (2015)	N=82 6 workshops with 12-15 participants March 2011-April 2013 All critical care nurses who provided care for adult patients in the medical-surgical, cardiac, and neurological ICUs, as well as nurses on rapid response team and ED University of California San Francisco Medical Center	Quality Improvement Project	Intervention: communication based workshop 1.) Needs assessment to identify communication challenged 2.) 3 role play discussions, modeling a bedside nurse's discussions with a patient's family member, a physician, and in a family meeting 3.) reflection session	Participant surveys (14-22 items, before, after, and 3 months after workshop-measuring confidence on 4pt Likert scale and skill on a 5pt Likert scale, as well as overall rating of workshop and use of skills) and discussions with focus group Logistical regression in Stata 12.1 software Qualitatively analyzed themes in participant evaluations	9 skill survey items, reported very good or excellent levels of skill after workshop, higher than before ($p<.001$) Participants completing 3-month survey rated skill in all items higher than before ($p<.001$) Confidence higher for all items after workshop and at 3 months ($p<.001$) All participants reported increased awareness in survey immediately after workshop 54% reported use skills presented in

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
			Comparison: pre/post surveys for workshop		workshop every shift or most shifts 92% agreed or strongly agreed skills in workshop enhanced ability to ensure patient families and providers communicated about prognosis and goals of care at 3mths Themes: Clarification & reinforcement of nurses role & responsibilities in discussions of prognosis and GOC, practice communication skills during role play, give "tool kit" to actualize role in discussions, feeling empowered to voice concerns & participate in GOC

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcomes
					discussions, increase empathy & feel more connected families/MD/others, culture in the medical center is changing to involve nurses in communication.
Yuen et al. (2013)	N=33 Medicine interns training at an urban, academic medical center	Pilot Study	Intervention-PowerPoint online module followed by 4 hour workshop at medical intern retreat	Post-intervention questionnaires: self-assessed skills, open ended question about important learning Retrospective pre/post workshop comfort level with ICU communication skills.	Interns reported significant improvement in their comfort level with ICU communication skills (pre 3.26, post 3.73, p=0.004) 100% obtained understanding of patient/family perspectives, values, goals overall satisfaction with workshop high (mean 4.45 on 5 pt. scale)

Table 6.

Summary of Studies About Eliciting Daily Goals

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcome
Justice et al. (2015)	Cardiac ICU	Quality improvement (plan, do, study, act)	Write down/read back process of eliciting daily goals (write on whiteboard/laminated paper)	The Rounds Effectiveness Assessment and Communication Tool (REACT)	After intervention agreement for patient goals went from 62% to 85% Patient satisfaction improved froma mean of 4.6 to 5.7 (likert scale 1-6) Visual display of patient daily goals via write down/read back process improved comprehension of goals and improves patient satisfaction.
Revello &Fields (2015)	Nurses N=31 Patient audits prior to intervention N=35	Pre and post evaluation of intervention	30 minute educational program attended by nurses before or after their shift with SMART (specific, measurable,	Three Likert items about class for nurses Audits of SMART patient goals written on white	Pre intervention: 11% written on white board, 37% patients articulated goals, 20% agree nurse collaborated, 57% felt informed.

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcome
	Patient audits at 4 weeks N=63 Patient audits 4 months N=46		achievable, reasonable, time bound) Goal Evaluation Method incorporated	board, patients asked to articulate daily goal, if their nurse collaborated, and if they felt informed	4 weeks: 40% written on white board, 60% patients articulated goals, 52% agree nurse collaborated, 63% felt informed. 4 months: 63% written on white board, 67% patients articulated goals, 67% agree nurse collaborated, 91% felt informed. There were significant increases in patient audits using chi squared analysis
Van de Glind et al. (2015)	Nursing records from Lively Legs Program N=71	Exploratory secondary analysis of data	Nurses were trained to use SMART criteria when addressing goals with patients	Two researchers independently reviewed nurse records (number, topics, and quality of goals) Descriptive statistics,	68% of goals were performed in a specific, measurable, time-bound manner

Study	Subject and Setting	Study Design	Intervention and Comparison Group	Evaluation	Outcome
				frequencies, and crosstabs described patients and goals set Chi square and t tests looked at differences between patient groups	

Table 7.

Patient Demographics

	Before	After	Sig.
Age	65.20 (SD 14.033)	63.82 (SD 12.565)	0.384
Length of Stay	4 (IQR 5)	4 (IQR 5)	0.899

Table 8.

Patient Survey Data Analyzed with Independent t-test

	Before	After	Sig
How accurately did the whiteboard reflect your personal goals for this hospital stay?	3.24 (SD 1.636)	4.53 (SD 0.893)	0.000
How do you feel that staff addressed your daily goals?	4.16 (SD 1.267)	4.71 (SD 0.565)	0.008
How meaningful was addressing daily goals to you?	4.02 (SD 1.348)	4.39 (SD 0.916)	0.114
How do you feel the nurse collaborated with you concerning your goals?	4.20 (SD 1.309)	4.76 (SD 0.542)	0.008
How involved do you feel in your care?	4.40 (SD 1.010)	4.68 (SD 0.620)	0.130

Note. Significance based on $p<0.05$.

Appendix A. IRB-HSR Application form. Adapted by Michelle Erli

Date of Submission	9/8/16
PI Name - *ONE name only*	Michelle Erli
PI Email	me7jw@virginia.edu
PI Phone	201-961-3539
Contact Name	Michelle Erli
Email	me7jw@virginia.edu
Phone	2019613539
UVa Messenger Mail Box #	N/A
Project/Protocol Title	Promoting Patient Preferences Through Nurse-prompted Elicitation of Daily Goals: A DNP Project Proposal
External Funding Source	N/A
Brief Summary of Project *(500 words or less.* 1. *If you will be receiving data/ specimens explain where they will come from, and the reason for which they were originally collected.* 2. *Please also explain what you will do with the data/specimens for this project* ***at UVA.***	Nurses are already encouraged to ask patients about their daily goals on 4 East, however, this is not always done in practice. With the roll out of new whiteboards at UVA with a daily goal designated space, this project aims to encourage nurses to ask about and record patient daily goals. Nurses on an acute cardiology unit will receive information regarding the implementation of a nurse prompt to elicit patient goals. This intervention will consist of a brief introduction at a monthly nursing meeting along with a PowerPoint emailed to staff. The nurse prompt consists of three questions aimed at eliciting patient daily goals (i.e. what is your goal for today?, what is your goal for leaving the hospital?, how can I help you work towards achieving this goal?) . Whiteboards will be audited pre- and post- intervention, to compare how often patient daily goals are recorded. Patients will be given a 5 question Likert survey to ascertain whether staff addressed daily goals pre and post intervention (no HIPPA protected identifying information will be collected). A Likert survey will be distributed to nurses to determine their satisfaction with using the three question prompt as well as workflow feasibility. This data will be collected to help improve the quality of care and patient centered interactions on 4 East. Data will also become part of a DNP project report. It potentially would also be submitted as a poster presentation at a conference or a manuscript in a nursing quality care journal.

If you check an item under question # 1 below YOU ARE DONE. DO NOT ANSWER ANY ADDITIONAL QUESTIONS.
If you do NOT check an item under #1 proceed to #2.

1H. ☒ Project was or will be conducted as a Health Care Delivery Improvement Project (e.g. Performance Improvement, Practice Improvement, Quality Improvement). An Improvement Project is one that meets either of the criteria listed below.
Additional Information may be found at Improvement Project vs Research- UVa Guidance

- Implementing an accepted practice to improve the delivery or quality of care or services (including, but not limited to education, training and changing procedures related to care or services) if the purposes are limited to altering the utilization of an accepted practice and collecting data or biospecimens to evaluate the effects on the utilization of the practice.
- Data collection and analysis, including the use of biospecimens, for an institution's own internal operational monitoring and program improvement purposes, if the data/biospecimen collection and analysis is limited to the use of data or biospecimens originally collected for any purpose other than the currently proposed activity, or is obtained through oral or written communications with individuals (e.g., surveys or interviews).

➧ If the Journal requires documentation of IRB review, complete the information on page 2 and submit this form to the IRB-HSR.

➧ If you will share health information and /or specimens outside of UVa with any of the following HIPAA identifiers you must contact Medical Center Procurement to establish a HIPAA Business Associate Agreement (BAA). The BAA will bar the release of any identifiable data outside of the registry. If the registry plans to release data outside of the registry in the form of a limited data set, the BAA should reflect that the outside entity is being asked to create a limited data set that can be used for research. For more information see *http://www.hhs.gov/ocr/privacy/hipaa/faq/business_associates/468.html* .

1. *Name*
2. Postal address information, other than town or city, state, and zip code
3. Age if over the age of 89 OR Date of Birth if over the age of 89
4. Telephone numbers
5. Fax numbers
6. Electronic mail addresses
7. Social Security number
8. Medical Record number
9. Health plan beneficiary numbers
10. Account numbers (e.g. bank numbers, credit card numbers, hospital bill account number)
11. Certificate/license numbers (e.g. passport number, driver's license number, medical board license number)
12. Vehicle identifiers and serial numbers, including license plate numbers
13. Device identifiers and serial numbers
14. Web Universal Resource Locators (URLs)
15. Internet Protocol (IP) address numbers
16. Biometric identifiers, including finger and voice prints
17. Full face photographic images and any comparable images
18. Any other unique identifying number, characteristic, code that is derived from or related to information about the individual (e.g. initials, last 4 digits of Social Security #, mother's maiden name, first 3 letters of last name.)

FOR IRB-HSR OFFICE USE ONLY

☒ **Project is determined to NOT meet the criteria of Research with Human Subjects or a Clinical Investigation** and therefore is not subject to IRB-HSR Review.
NOTE: *Project team is required to follow UVa policies to protect the data. See Appendix B: Privacy Plan.*
UVa Tracking # 19301_

☐ Please provide this signed form to Medical Center Procurement as your project has external funding or plans to share identifiable health information outside of UVa. .

☐ **Project is determined to be Human Subjects Research or a Clinical Investigation** and must be submitted to the IRB-HSR for review and approval prior to implementation
UVa Tracking # _____

Joanna Faulconer _____ 09/13/16
Signature: IRB-HSR Chair, Vice Chair or Director Date

Appendix B. Journal of Nursing Care Quality Manuscript Submission Requirements

Journal of Nursing Care Quality

Online Submission and Review System

Journal of Nursing Care Quality Online Submission and Review System

Editorial Purpose

The primary objective of the *Journal of Nursing Care Quality (JNCQ)* is to provide practicing nurses and nurses in leadership roles with useful information about patient safety, quality care, and the application of quality principles in the clinical setting. Articles in the *JNCQ* address patient safety, innovative and effective approaches to improving quality and safety in healthcare, research on quality care, and evidence-based practice in nursing. The *JNCQ* provides a forum for the discussion of patient safety issues and "real world" implementation of quality-related activities.

Manuscript Review

The *JNCQ* is a peer-reviewed journal. Published manuscripts have been reviewed, selected, and developed with the guidance of the editorial board. Manuscript content is assessed for relevance, accuracy, and usefulness to practicing nurses, nurses in leadership roles, and other healthcare providers involved in evaluating and improving safety and quality of care. Manuscripts are reviewed with the understanding that neither the manuscript nor its essential content has been published or is under consideration by others.

Authorship Responsibility

All persons designated as authors should qualify for authorship. Each author should have contributed significantly to the conception and design of the work and writing the manuscript to take public responsibility for it. The editor may request justification of assignment of authorship. Names of those who contributed general support or technical help may be listed in an acknowledgment placed after the narrative and before the references.

Query Letters

Although not necessary, query letters allow the editor to indicate interest in, and developmental advice on, manuscript topics.

Manuscript Preparation

Prepare manuscripts according to the *American Medical Association (AMA) Manual of Style (10th ed)*. The maximum manuscript length is approximately 16 pages including references. As a general rule, a 16-page paper should have no more than 3 figures or tables.

For manuscripts describing quality improvement studies, follow the Standards for Quality Improvement Reporting Excellence (SQUIRE) guidelines at http://www.squire-statement.org/guidelines. (see also Oermann MH. SQUIRE guidelines for reporting improvement studies in healthcare: Implications for nursing publications. *J Nurs Care Qual*.2009; 24(2):91-95 For some manuscripts, it may not be appropriate to include

every guideline item, but authors should consider each item in preparing their papers for submission. The "Discussion" section should include nursing implications. ***Format*** Double space the manuscript using a 12-point type size, any font style. Left justify all text, including headings. Divide the text into main sections by inserting subheadings. All headings are flush left, in bold, and distinguished by level as follows:

FIRST-LEVEL HEADING (CAPITALIZED ON SEPARATE LINE) Second-level heading (Regular on separate line) ***Third-level heading (Italic on separate line)***

Do not use running headers or footers.

Title/Author Biography Page

Information for the title/author biography page is placed in a 1-page Word file. This information should not be placed in any other file. This title page Word file should contain only the: Title of the manuscript;

1 Author(s) names and credentials (highest earned credential only, followed by RN, and certifications);

2 Author(s) affiliation(s): job title, department, institution, city, state, country;

3 Corresponding author: For publication, it is preferable to use a work address. You must include an e-mail address at the end of your mailing address; and

4 Funding information and other disclaimer or disclosure information. Include disclosure of funding received for this work from any of the following organizations: National Institutes of Health (NIH); Wellcome Trust; Howard Hughes Medical Institute (HHMI); and other(s).

Abstract

Include an abstract of 50 to 75 words that stimulates readers' interest in the topic and states what they will learn from reading the article. ***Tables and Figures*** Tables and figures, if any, should be saved as individual files. All tables must be numbered consecutively with Arabic numbers and have a title. All figures must be numbered consecutively with Arabic numbers and have a title. Tables and figures must be cited in numerical order in the text. All figures and other artwork should be submitted in black and white.

A) Creating Digital Artwork

1 Learn about the publication requirements for Digital Artwork:

http://links.lww.com/ES/A42

2 Create, Scan and Save your artwork and compare your final figure to the Digital Artwork Guideline Checklist (below).

3 Upload each figure to Editorial Manager in conjunction with your manuscript text and tables.

B) Digital Artwork Guideline Checklist

Here are the basics to have in place before submitting your digital artwork: • Artwork should be saved as TIFF, EPS, or MS Office (DOC, PPT, XLS) files.

High resolution PDF files are also acceptable. • Crop out any white or black space surrounding the image. • Diagrams, drawings, graphs, and other line art must be vector or saved at

a resolution of at least 1200 dpi. If created in an MS Office program,

send the native (DOC, PPT, XLS) file. • Photographs, radiographs and other halftone images must be saved at a

resolution of at least 300 dpi. • Photographs and radiographs with text must be saved as postscript or at a

resolution of at least 600 dpi. • Each figure must be saved and submitted as a separate file. Figures should

not be embedded in the manuscript text file.

Remember:

• Cite figures consecutively in your manuscript. • Number figures in the figure legend in the order in which they are

discussed. • Upload figures consecutively to the Editorial Manager web site and enter

figure numbers consecutively in the Description field when uploading

the files.

References

Prepare references according to the style used in the *AMA Manual of Style* (10th ed.). References should be typed double-spaced and placed at the end of the manuscript. They should be numbered consecutively in the order in which they are cited in the text. Whenever a reference is repeated in the text, it uses the same reference number each time. Journal titles should be abbreviated according to the listing in the PubMed Journals database. If not listed there, journal titles should be spelled out.

Examples: Journal article with 1 author: Clancy CM. The promise and future of comparative effectiveness research. *J Nurs Care Qual*. 2010;25(1):1-4. Journal article with multiple authors: Levin RF, Keefer JM, Marren J, Vetter MJ, Lauder B, Sobolewski S. Evidence- based

practice improvement: merging 2 paradigms. *J Nurs Care Qual*.2010;25(2):117-126. Book: Oermann MH, Hays JC. *Writing for Publication in Nursing*. 3rd ed. New York: Springer;2016. Web site: 2010 National Patient Safety Goals (NPSGs). The Joint Commission Web site. http://www.jointcommission.org/patientsafety/nationalpatientsafetygoals/.

Published June 2006. Accessed May 1, 2010. For other electronic references, follow guidelines in the *AMA Manual of Style* p. 63.

Permissions

Written permission must be obtained from (1) the holder of copyrighted material used in the manuscript, (2) persons mentioned in the text or acknowledgment, and (3) the administrators of institutions mentioned in the text or acknowledgment. Where permission has been granted, the author should follow any special wording stipulated by the grantor. Letters of permission must be submitted before publication of the manuscript. Permission forms are available under Files and Resources.

Compliance with NIH and Other Research Funding Agency Accessibility Requirements

A number of research funding agencies now require or request authors to submit the postprint (the article after peer review and acceptance but not the final published article) to a repository that is accessible online by all without charge. As a service to our authors, LWW will identify to the National Library of Medicine articles that require deposit and will transmit the postprint of an article based on research funded in whole or in part by the National Institutes of Health, Wellcome Trust, Howard Hughes Medical Institute, or other funding agencies to PubMed Central. The revised Copyright Transfer Agreement provides the mechanism.

Conflicts of Interest

Authors must state all possible conflicts of interest in the manuscript, including financial, consultant, institutional and other relationships that might lead to bias or a conflict of interest. If there is no conflict of interest, this should also be explicitly stated as none declared. All sources of funding should be acknowledged in the manuscript. All relevant conflicts of interest and sources of funding should be included on the title page of the manuscript with the heading “Conflicts of Interest and Source of Funding:”. For example:

Conflicts of Interest and Source of Funding: A has received honoraria from Company Z. B is currently receiving a grant (#12345) from Organization Y, and is on the speaker’s bureau for Organization X – the CME organizers for Company A. For the remaining authors none were declared.

In addition, each author must complete the journal's copyright transfer agreement, which includes a section on the disclosure of potential conflicts of interest based on the recommendations of the International Committee of Medical Journal Editors, "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (www.icmje.org/update.html). On submission, all authors will be emailed a hyperlink to verify

their co- authorship and complete the LWW Copyright Transfer and Disclosure Form within Editorial Manager. Co-authors do not have to register in Editorial

Manager. <p>A copy of the form is made available to the submitting author within the Editorial Manager submission process. Co-authors will automatically receive an Email with instructions on completing the form upon submission.

Online Manuscript Submission

All manuscripts must be submitted online through our Web-based Editorial Manager system at http://jncq.edmgr.com. Submit your manuscript according to the author instructions. You will be able to track the progress of your manuscript through the system.

First-time users: Click the Register button from the menu (on the upper banner) and enter the requested information. On successful registration, you will be sent an e-mail indicating your user name and password. Save a copy of this information for future reference.

Return users*:* If you have received an e-mail from us with an assigned user ID and a password, or if you are a repeat user, do not register again. Just log in. Once you have an assigned ID and a password, you do not have to re-register even if your status changes (ie, author or reviewer).

After registering as an author, log on to http://jncq.edmgr.com and select "Submit a New Manuscript." You will then: 1 Select an "article type" from the drop down menu

. 2 Enter the title of your manuscript

. 3 Add information about the author(s) of the paper

. 4 Enter abstract of your manuscript

. 5 Enter a few key words that describe your manuscript's content

. 6 Enter your comments to the editor in a dialogue box, mentioning any prior query you may have had with the editor

. 7 Attach your various individual files containing elements of your entire

8 9 10 11

manuscript. No file should contain information found in any other file: Title/author biography page Abstract

Manuscript text, ending with the references

As many individual files as necessary, each containing 1 table or figure.

When all files are attached, the system will prompt you to complete a process that will submit your manuscript to the editorial office. You will receive an e-mail to let you know that the journal office received your manuscript. After the review process, you will receive an e-mail letting you know the final disposition of the manuscript. You may check the status of your manuscript at any time by logging in to http://jncq.edmgr.com. Select "Submissions Being Processed."

Revised Submission

If your manuscript is accepted for publication, the revision is submitted

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online at http://jncq.edmgr.com. **Do NOT submit your revision as a "New Submission" under the heading "New Submissions."** Log in using the same user name and password. On the Author Main Menu, under the heading **"Revisions,"** select the "Submissions Needing Revision" link, which will be the only active link.

Help

If at any time during this process you have questions, please e-mail moermann@msn.com or marilyn.oermann@duke.edu, phone 248-568-1848. The Editorial Office mailing address is *Journal of Nursing Care Quality*, Marilyn H. Oermann (Editor), 148 Saxapahaw Run, Chapel Hill, North Carolina 27516, USA.

Appendix C. Manuscript for submission to Journal of Nursing Care Quality.

Promoting Patient Preferences Through Nurse-prompted Elicitation of Daily Goals

Michelle Erli, MSN, RN, ACNP; Clareen Wiencek, PhD, RN, ACNP, ACHPN; Deborah Dillon, DNP, RN, ACNP-BC, CCRN, CHFN

University of Virginia School of Nursing

Charlottesville, Virginia, USA

Disclosure: I have no conflict of interest or funding to disclose.

ABSTRACT

Background: There exists a number of best practice guidelines emphasizing the importance of establishing patient goals, but this is not always practiced.

Purpose: This project seeks to answer: does a nurse-prompted daily goals of care assessment improve documentation of goals, impact patient perception of care and impact nurses' satisfaction and perceived barriers to prompting goals?

Methods: Nurses were educated to prompt goals. Whiteboards were audited and patients were given a Likert before/after survey. Nurses were surveyed about satisfaction and barriers.

Results: Whiteboard documentation increased from 26.0% to 68.4% ($p<0.001$). Patient survey data showed significant increases in three questions: whiteboard reflects goal mean score 3.24 to 4.53 ($p<0.001$), staff addressed daily goals mean score 4.16 to 4.71 ($p=0.008$), and nurse collaborated mean score 4.20 to 4.76 ($p=0.008$).

Conclusion: This project lays groundwork for future investigations into eliciting patient goals.

INTRODUCTION

Patient preference is an important aspect of care that allows for interprofessional teams to tailor interventions in a way that improves patient satisfaction. Unfortunately, patient preference is overlooked at times. When organizational structures are placed to elicit patient goals and preferences, they are not always effectively implemented in practice. The framework of Plan, Do, Study, Act (PDSA) was utilized for the implementation of this intervention. [1] The aim of this project was to answer the following; does a nurse-prompted daily goals of care assessment improve documentation of goals, impact patient perception of care and impact nurses' satisfaction and perceived barriers to prompting goals?

Theoretical Framework

The relationship-based care model provided a relevant context for this project. Relationship-based care implies that people and relationships are of the greatest importance and effective care delivery systems are those designed with the patient always held in the highest regard.[2] This theory allows for a patient-centered care delivery, which rests on the elicitation and integration of goals from the patient's perspective.

REVIEW OF LITERATURE

Literature was systematically reviewed from January 1, 2012 to April 23, 2016. Five databases were searched (OVID Medline, CINAHL, Cochrane, PubMed, and Web of Science).

Eliciting patient goals has been shown to improve quality of care. A number of protocols and best practice guidelines exist that highlight the importance of extracting patient goals of care to improve both the patient experience and physical care. [3, 4, 5, 6, 7] Systematic reviews also have shown that considering patient preference leads to improvements in physical health, psychological health, self-management capabilities and health behaviors of patients.[8] However,

guidelines are not always translated effectively into practice.

There are gaps in communication among health care professionals, as well as between patients and health care providers. [9, 10] There are a number of barriers to this communication, namely inadequate preparation and education in identifying and communicating patient goals, lack of resources, and documentation policies. [11, 12, 13] This deficiency could be improved by increasing education, developing communication skills, and providing professionals with adequate tools to enhance communication.

Significant improvement in communication skills among health care professionals has been demonstrated when a communication-based training intervention was provided. Both nurses and residents have been studied with regards to communication skills workshops. They have proved to be beneficial to both professional groups, improving confidence and comfort in communication regarding patient goals of care. [14, 15, 16, 17, 18]

Investigations focused on interventions to improve goal elicitation and patient satisfaction regarding whiteboard usage and nurse-led initiatives provided the inspiration for this project. [18, 19, 20] Recording daily goals on a whiteboard facilitates a consistent plan of care, goal directed care, and provides health care providers with a daily list of patient goals to review. [19] One quality improvement study focused on whether an educational intervention for nurses improved identification of patient daily goals. Overall, this study showed that the nurse educational intervention increased whiteboard documentation, articulation of goals, nurse collaboration concerning goals and patients felt more informed by nurses. [18]

Although daily goals are addressed in the literature, this search revealed that many studies look at daily goals through the perspective of the interprofessional team rather than the patient. This project examined the impact of nurse prompts on documentation of goals and also

measured the patient perspective of daily goals, nurse satisfaction, and perceived barriers to eliciting goals.

METHODS

Research Design

A before and after measurement of the impact of a brief educational intervention on how nurses use prompts to improve elicitation and documentation of goals of care was conducted. Survey-based measurements of patient satisfaction, nurse satisfaction, and nurse reporting of barriers to eliciting goals were also collected.

Sample

A convenience sample of patients on an acute cardiology unit comprised the sample. Patients on this unit had a variety of cardiac conditions with a median length of stay of 4 days. 50 patients participated before the educational intervention and 38 patients participated afterwards. Inclusion criteria were as follows: 1) adult patient 2) setting of acute cardiology unit 3) English speaking 4) alert and oriented. Exclusion criteria were as follows: 1) decreased level of consciousness or orientation 2) critical illness needing transfer to another unit or multiple road trips 3) patient refusal. The intervention included a brief introduction to nurse prompts at a staff meeting, a PowerPoint sent to all nursing staff, and one on one follow up with nursing staff. All 36 nurses working on the unit during implementation were invited to take a Likert survey regarding their satisfaction with daily goal prompts and perceived barriers.

Setting

This quality improvement project was conducted on a 28 bed acute cardiology unit at a university medical center in the eastern United States. The unit employed 36 RNs, with a baseline nurse patient ratio of 1:4 per shift. This setting used an interprofessional rounding

system for select patients on the acute cardiology and heart failure services. This consisted of a patient-centered scripted interprofessional rounds initiative where the entire team involved in the patients' care, including social work, physicians, physical and occupational therapists, nurses, pharmacists, and patient care technicians, performed morning rounds in the patient room. The nurse was responsible for identifying and reporting patient goals during morning rounding. Patients on other medical services received standard morning rounding, where physicians discussed patient plans outside of the room and asked nurses for any input at that time. Approval from the medical director, nurse manager, and clinical nurse specialist on the study unit was obtained.

Procedures

A study of the outcomes of a nurse prompt to elicit-patient goals and promote patient centered-care was performed. Whiteboards were audited before the intervention, to measure how often patient goals were recorded. 50 whiteboards were observed before the intervention. Patients were given a 5 question point-Likert survey about daily goal elicitation to determine patient perceptions of whiteboard reflection of goals and staff involvement.

Next, nurses on the acute cardiology unit received information regarding use of a 3 question nurse prompt aimed at eliciting patient goals. This intervention consisted of a brief introduction at a monthly nursing staff meeting with a 15-minute PowerPoint about daily goals. After this meeting, a PowerPoint consisting of the same information was emailed to all nursing staff on the unit. The project investigator completed brief 5-minute one-on-one discussions with individual nurses on the floor to ensure understanding. 88% of the nurses on the unit received this one-on-one follow-up. The following week, nurses implemented nurse prompting of patient goals, incorporated these goals into rounding, and listed them on the patient whiteboards.

One-month after the educational intervention, 38 whiteboards were audited for daily goals documentation. A convenience sample of 38 patients were given the same daily goals survey as before the intervention. A nurse survey was also emailed to staff one month after the educational intervention concerning satisfaction with the nurse-led prompts and perceived barriers. Ten nurses (29.4%) returned the survey.

Protection of Human Subjects

The Institutional Review Board for Health Science Research (IRB-HSR) at the medical facility deemed the project to be quality improvement; not meeting the criteria of research with human subjects or clinical investigation.

Measures

Whiteboard goals. The whiteboard is a communication tool in each patient room that leaves space for names of providers and a blank area for additional documentation. White boards were audited for the yes/no presence of daily goal documentation before the intervention by observation. After the intervention, white boards were again audited for presence of daily goal documentation. Before and after intervention data concerning whiteboard documentation of goals was compared using chi-square.

Patient survey. An investigator developed five question Likert survey, derived from Revello and Fields[18] outcome measures, collected patient perspectives as to whether staff addressed goals. It consisted of five point-Likert style questions ranging from 1 (low satisfaction) to 5 (high satisfaction). Demographic data collected for patients was age and length of stay (Figure 1). Descriptive statistics of the sample were performed and independent sample t-tests were conducted to test for significance.

Nurse survey. An investigator developed survey collected nurses' perspectives on the

satisfaction with as well as barriers to the nurse prompt intervention. Demographic data collected for nurses included age, gender, years of experience as a nurse, and prior ELNEC or communication training. Data were analyzed using descriptive statistics and anecdotal findings.

Data Analysis

Data were collected in Microsoft Excel and were analyzed using IBM SPSS Statistics (version 24) software. Chi square was performed on nonparametric data and independent t-test was performed to compare groups. A statistician reviewed findings.

RESULTS

Whiteboard Goals

Observed whiteboard documentation of patient daily goals increased from 26.0% to 68.4% (Figure 2). Chi-square analysis showed a statistically significant increase in whiteboard goal documentation ($p<0.001$).

Patient Survey

Demographic data for the before patient group (n=50) consisted of a mean age of 65.20 (SD 14.033) and a median length of stay of 4 days (IQR 5) with a range of 1 to 81 days. The after patient group (n=38) consisted of a mean age of 63.82 (SD 12.565) with a median length of stay of 4 days (IQR 5) ranging from 1 to 60 days. There was no significant difference in age or length of stay between groups. There was also no difference found in the white board documentation of patient survey data for patients in the interprofessional rounding group versus standard rounding processes. The interprofessional rounding group consisted of before (n=30) and after (n=22), while the standard rounding group consisted of before (n=20) and after (n=16).

Survey data was statistically analyzed with independent t-test and showed statistically significant increases in three questions (Table 1). Survey data scores were based on Likert scale

range of 1 (low satisfaction) to 5 (high satisfaction). “How accurately did the whiteboard reflect your personal goal for this hospital stay” increased from a mean score of 3.24 to 4.53 (p<0.001). “How do you feel staff addressed your daily goals” increased from a mean score of 4.16 to 4.71 (p=0.008). “How do you feel the nurse collaborated with you concerning daily goals” increased from a mean score of 4.20 to 4.76 (p=0.008).

Although the remaining two survey questions did not show a statistically significant increase, there was an increase in mean score. “How meaningful was addressing daily goals to you” had a mean increase from 4.02 to 4.39 and “How involved in your care do you feel” had a mean increase from 4.40 to 4.68.

Nurse Survey

Nurses surveyed (n=10) had a mean age of 36.50 (SD 10.650) and a mean years of experience of 5.11 (SD 9.070). Of nurses surveyed, 30% reported having additional communication training.

Survey data scores were based on Likert scale range of 1 (low satisfaction) to 5 (high satisfaction). Nurses reported degree of satisfaction with prompting daily goals with a mean score of 3.57 (SD 0.738), likeliness to prompt goals with a mean score of 3.60 (SD 0.843), and reported willingness to continue to ask patients about their daily goals in the future with a mean score of 3.90 (SD 0.876).

Anecdotal Findings

Anecdotal patient comments were collected during the post survey. Themes included inability to see the whiteboard and stating that the boards are extremely informative and useful, but they were not asked about personal goals. One patient stated, “they have outlined my plan of care and put very important information on the board, now my goals they did not ask”. Other

patients were extremely pleased with the care, felt informed, and that their goals were addressed.

Nurses felt that barriers to goal prompting consisted of patients not having a goal, busy shifts, lack of patient understanding, and lack of board space. Nurses stated that goals may not be beneficial for everyone, there is a need for further standardization, and that the goals section of the whiteboard should be highlighted and used more.

DISCUSSION

This improvement project demonstrated that nurse prompts increased the documentation of daily patient goals and improved patient's perception that care was based on those goals. After the educational intervention at the monthly staff meeting, PowerPoint, and one on one follow-up, more whiteboards showed documentation of goals and patient perceptions of staff and nurses collaborating concerning goals increased. These results were similar to Revello and Fields findings of increased whiteboard documentation and increased patient perception of goal collaboration after a nurse education intervention. [18] Consistency in the educational intervention allowed for a framework and reminder to nurses to elicit patient goals.

Patients rated daily goals highly as being meaningful at baseline and many stated how important goals were as a part of hospital care. Visual display and read back of patient goals improves comprehension of goals by the team and families. [21] This improvement project provided for an increase in documentation of goals on whiteboards, but more importantly it showed an increase in patient perception that the whiteboards adequately reflect daily goals. This provides evidence that nurses were adequately discussing patient goals and were communicating sufficiently about actual patient preferences. Patients felt their goals were acknowledged. It also provided for increased documentation, allowing for all team members to see displayed patient goals in the room.

A variety of specialty teams provided care for patients on the unit in this study (acute cardiology, critical care, heart failure, general medicine, etc.). There was a patient centered scripted interprofessional rounds initiative on some of the cardiac teams, which may have impacted patient perception of care. However, nursing staff remained constant among all patients, regardless of provider team. There was no statistically significant difference in patient survey scores between rounding groups, which supports the impact of nurse prompted goals regardless of the rounding model.

Interestingly, one point made by a number of patients was that they have been well informed about their care, but were not asked about their patient specific goals. A similar trend occurred throughout the review of literature, where many articles addressed team goals and plans but neglected to focus on patient perspectives. This area is worthy of further study due to the importance and shift in healthcare focus towards patient centered care.

Nurses reported a moderate level of confidence that they will continue nurse-led prompts to elicit patient goals but did identify many barriers to eliciting patient daily goals. This provides room for continued improvement and education of staff. Though there are multiple demands on nurses and patients may not understand what a daily goal means, nurse-patient communication is an important skill that should be incorporated in all aspects of nursing care. Daily goal elicitation is a foundational practice to improving patient-family centered care.

Limitations

Two hospital wide initiatives relating to comfort rounding and whiteboards were introduced during the same timeframe that this project was implemented, providing for possible confounding variables. Comfort rounding consisted of a staff member checking on patients hourly to ensure that patient needs were being met. The hospital also received new whiteboards

for patient rooms that had sections for the date, staff names, plan and goals. These initiatives may have had an impact on patient preference and satisfaction as well as whiteboard usage.

A limitation of the nurse education portion of this project was the number of nurses in attendance at the staff meeting during which the education occurred. There were only ten out of 36 nurses in attendance. This was addressed by modifying teaching to include one-on-one follow-up with nursing staff. The nurse survey was also distributed around the same time that second set of data was collected, which could have served as a reminder for nurses to elicit patient daily goals.

Limitations of the patient survey consisted of limited demographic data to compare, only age and length of stay were collected. There was also a possible ceiling effect as the before intervention data already had fairly high scores. Therefore, it would be more difficult to achieve a large enough increase to have statistically significant results.

Nursing Practice Implications

This project is in alignment with hospital and national goals to improve patient centered care, satisfaction, and nicely complements the objectives of the pre-existing comfort rounding and whiteboard usage initiatives at the medical center. The unit receiving the intervention had already listed daily goals as an important part of daily rounding, but it was not implemented consistently. This project provided for additional education and strategy for nursing staff to consistently achieve this aspect of patient care. The described patient experience may provide a rich source of information for clinicians to inform the provision of care. Nurse prompting aimed at eliciting patient goals, may be generalized to other units throughout the health system, as it is not a diagnosis specific aspect of care.

Eliciting patient preference and goals are the cornerstone of patient centered care. This

study provides insight to the patient perspective of how nurses listen to their concerns and goals. It has the potential to impact the way that nurses address patient goals as well as impact the confidence nurses have with bringing up goal discussions.

Listening to patient goals and following their wishes contributes to minimizing unnecessary or unwanted diagnostics, procedures, and care. [22] Aligning healthcare to the patients' goals can improve the health status from the perspective of the patient. Understanding the patient's goal will also allow the team to recognize factors that may impact how patients take care of themselves and perceive their own health. Communicating with patients about their wishes is ultimately a part of care coordination; with implications regarding transitions through the healthcare system, length of stay, and readmissions.[23]

Recommendations

This study showed that education of nurses regarding communication of patient goals is beneficial. Adequate communication and patient input are key to patient-centered care. Therefore, more initiatives relating to nurse driven patient goal elicitation throughout the healthcare system should be considered. These initiatives could focus on standardization of goal prompting, setting a specific time to ask about goals throughout the shift. Nurse champions could also be selected on the unit to focus on encouraging education and patient goal elicitation.

Future studies should be conducted to further highlight the patient perspective of goal elicitation, rather than solely the team's perspective. A qualitative approach may explore themes in patient and nurse perceptions of goal communication in a deeper way. This is an area with many opportunities for further investigation and improvement for the enhancement of patient-centered care.

CONCLUSION

This improvement project consisted of an educational intervention to improve nurses' consistency in eliciting daily patient goals and documenting on whiteboards. Findings of the project were an increase in whiteboard documentation and patient perceptions of accurate goal reflection, staff addressing goals, and nurse collaboration regarding daily goals. Nurses rated prompting of patient goals moderately, which provides room for continued improvement and education regarding goal communication in the hospital. This quality improvement project lays the groundwork for future studies and investigations into the elicitation of patient goals.

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Age _____

Days in Hospital _____

Please answer the following questions on a scale of 1 (low)-5 (high).

6) How accurately did the white board reflect your personal goals for this hospital stay?

1 2 3 4 5

7) How do you feel that staff addressed your daily goals?

1 2 3 4 5

8) How meaningful was addressing daily goals to you?

1 2 3 4 5

9) How do you feel the nurse collaborated with you concerning daily goals?

1 2 3 4 5

10) How involved do you feel in your care?

1 2 3 4 5

Figure 1. Structured Patient Interview. Developed by Michelle Erli. Adapted with permission from Revello & Fields, 2015 (18) patient survey questions.

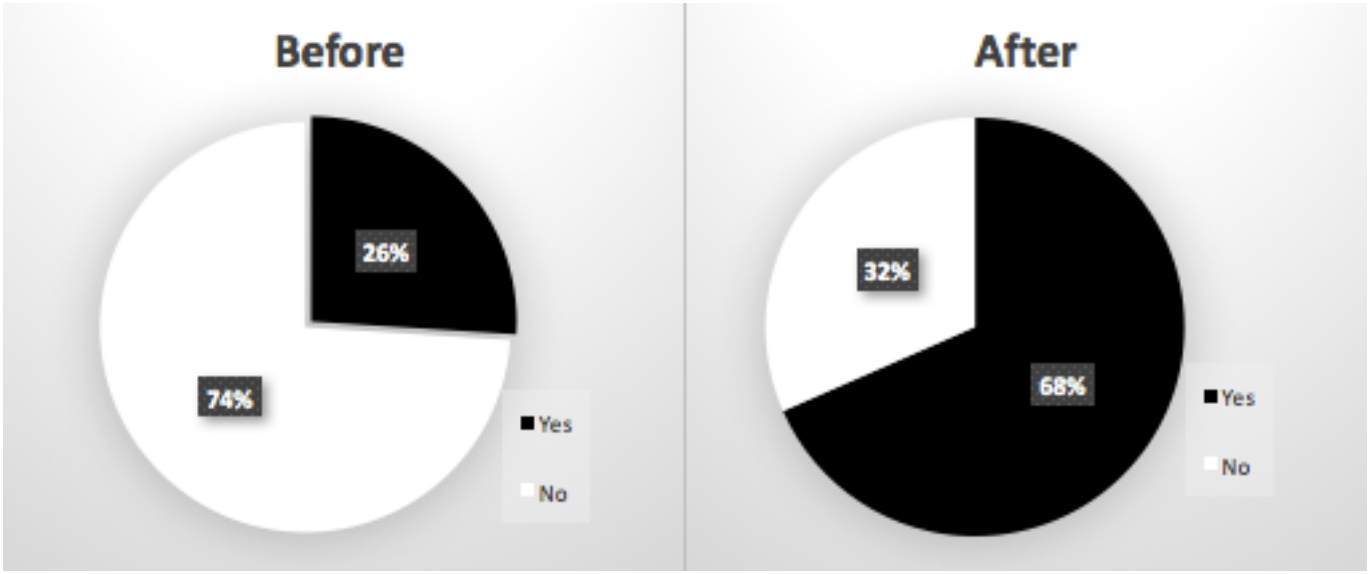

Figure 2. Whiteboard documentation observations before and after.

Table 1.

Patient Survey Data Analyzed with Independent t-test

	Before	After	Sig
How accurately did the whiteboard reflect your personal goals for this hospital stay?	3.24 (SD 1.636)	4.53 (SD 0.893)	0.000
How do you feel that staff addressed your daily goals?	4.16 (SD 1.267)	4.71 (SD 0.565)	0.008
How meaningful was addressing daily goals to you?	4.02 (SD 1.348)	4.39 (SD 0.916)	0.114
How do you feel the nurse collaborated with you concerning your goals?	4.20 (SD 1.309)	4.76 (SD 0.542)	0.008
How involved do you feel in your care?	4.40 (SD 1.010)	4.68 (SD 0.620)	0.130

* Significance based on $p<0.05$.