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Spring 6-19-2016

Use of the Patient Whiteboard to Improve Communication of Pain Medication Schedule

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Use of the Patient Whiteboard to Improve Communication of Pain Medication Schedule

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Author Note

This paper was prepared for Nursing 653 taught by Professor T. Gallo

Spring 2016

Abstract

Despite advances in treatment, pain remains a significant problem in healthcare today. Sub-optimal pain management results in poor patient outcomes and patient satisfaction, culminating in decreased quality of life and financial loss for the health care facility. An important component of pain management is transparent and timely health care team/ patient communication. This project aims to improve patient satisfaction in pain management by incorporating pain medication last given and next available times on patient whiteboards. The targeted floor was a busy post-op medical floor in a medium sized community hospital. Staff were educated with short educational sessions, educational pamphlets, an informational posterboard, and demonstration during RN shadowing. Pre-and post-intervention inquiries were conducted with staff and patients regarding whiteboard usage and pain management. Usage and accuracy were audited. Results indicate an improvement in patients' knowledge of their pain management plan, inclusion, and comfort in asking for medication. RN surveys revealed increases in writing, using, and perceptions of intervention utility A CNL using transformational leadership would be integral to shaping a culture that would embody and sustain patient-centered evidence-based practice.

Clinical Leadership Theme

The role of the clinical nurse leader (CNL) is one introduced by the American Association of Colleges of Nursing (AACN) in 2007, the first new nursing role in 35 years. It is the nursing profession's response to staggering evidence regarding patient harm from medical errors presented in the Institute of Medicine's IOM 1999 report, *To Err is Human: Building a Safer Health* System, along with the recognition of the contribution by the fragmented state of healthcare. Nursing needed to address this dire situation by encouraging full use of nursing capabilities and relevant education. The AACN issued a white paper regarding the education, diverse roles, and competencies needed. The CNL role necessitates a Masters level of preparation in order to affect patient centeredness at the point of care in the micro-system, using the most recent evidence-based practice in collaboration with a multi-disciplinary team (American Association of Colleges of Nursing, 2007).

This project incorporates the CNL roles of: advocate, information manager, systems risk analyst and outcomes manager. Advocacy is involved in putting into action a process that provides patient with information regarding their pain management plan in a transparent and easily accessible manner. Information manager skills are involved in the understanding of the unit ranking in national benchmarks using HCAHP numbers. This is closely allied with the systems analyst role of conducting patient and health care worker questionnaires to understand the present functional status of the floor in this regard. In implementing the project post-intervention questionnaires, auditing of practice prevalence and comparison of pre-and post-HCAHPS addresses the role of outcomes manager. The goal is to improve patient safety by facilitating nurse/patient and nurse/interdisciplinary communication in the arena of pain management.

Statement of the Problem

The patient's perception of pain management reflects the quality of the service (Alaloul, Williams, Dlauren Jones, & Logsdon, 2015).Despite many advances in the treatment of pain, it remains a significant problem handled inadequately in healthcare today (Kastanias, Denny, Robinson, Sabo, & Snaith, 2009). Pain management is essential for the healing process as it affects the patients' abilities to participate in healing activities, and decreases incidence of complications such as venous thrombosis and pulmonary problems (Bell & Duffy, 2009). The neural-endocrine system may be affected by inadequate pain management, potentially resulting in chronic pain and psychological trauma (Hayes & Gordon, 2015). Interventions addressing provider-patient pain management communication and patient knowledge of the plan, improve patient satisfaction and outcomes (Smith, DuHamel, Egert, & Winkel, 2010).Financially, the hospital will suffer with low HCAHP scores. Patient perception of their nursing care impacts hospital reimbursement, indicating the need to improve nursing communication skills (Long, 2012). Hospital rates below baseline and threshold result in withheld payment from CMS (Lake Superiior Quality Innovation Network, 2012). Furthermore, ethically the nurse as clinician and professional patient advocate has the imperative to relieve unnecessary pain (Bell & Duffy, 2009; Rejeh, Ahmaadi, Mohamadi, Anoosheh, & Kazemnejad, 2009). The purpose of this project is to address patient perception of pain management by using the whiteboard to communicate prn pain medication timing between nursing, the health care team and the patient.

Project Overview

The proposed intervention consists of RNs updating patient whiteboards to display the time the last pain medication was administered and the next time it is available. RNs will update at bedside shift report while confirming the information with each other and the patient. There are no interdisciplinary rounds at present. During the shift, RNs will update the information with the pain medications given. It is a simple procedure which does not require much time or

additional technology and materials, as witnessed in five separate RN shadowing sessions. The

aim is to improve pain management by enhancing nurses/patient communication with 90% use

of whiteboard communication by April 29,2016. This will improve patient satisfaction with pain

management and further the aim of patient-centeredness by the transparent exchange of

information. Patient satisfaction will be measured by comparison of pre and post-intervention

questionnaires and HCAHPS. Improvement in communication transparency is assessed by

auditing usage of the white board in pain management and information accuracy,

Rationale

HCAHPs for patient perception management on this unit from October to December of

2015 record: a 69.1% rating of "always" in response to how often pain was well controlled -

below the 50th percentile national ranking, and 78.2% rating of "always" in response to how

often did staff do everything they could to help with pain - below the 84% ranking in national

50th percentile (Professional Resource Consultants, Inc., 2016).

13 RNs (split between a.m. and p.m. shifts, 33% of total RN staff) questioned for unit

assessment of pain treatment pre-intervention rated an average of 7/10 for how well they thought

the floor treated pain and 6.6/10 for how well they felt supported in treating pain effectively.

(Appendix C)

The project involves inputting additional information to already available patient

whiteboards and writing materials. Last pain med administration and next dose available times

will be written there, updated at administration time and reviewed at shift hand-off. RN

education consists of maximum 10 minute explanations at shift huddles, since there are no staff

meetings on this unit. Staff-only brochures with explanation, pictures, process maps, and

references are distributed. These consist of 40 four-fold regular sheets of paper and one on a

lounge poster board, the board itself costing $13. Since the printing is minimal, it can be done on

the unit copier for nominal expense. The markers and whiteboards are already supplied. There

will be no cost for additional staff time. My time is free to them, but calculating practicum hours

times my last salary (times 1.5 for benefits), yields a cost of $16,500. This will include my time

spent auditing performance.

The project was initiated in response to low HCAHP scores regarding pain management.

Hospital rates below baseline and threshold are awarded 0 achievement points and 0

improvement points for rates below baseline period rates. The greater amount in either of these

points is used for each measure to determine a domain score, which has a weight percentage for

the total hospital score. Patient perception of care has a weight of 30%, thus indicating a

significant payment loss if not improved. (1.75% of DRG payment withheld [Medicare Learning

Network, 2013]). The cost to the hospital for extended LOS will vary according to the

complication that resulted, from thrombi complications to pneumonia from decreased

participation in healing activities due to inadequate pain management (see Appendix N).

Additional loss theoretically occurs with decreased consumer consumption of services from a

low-rated institution. Approximate costs monumentally overshadow cost of the intervention

Overall, my data indicates that using the whiteboard for pain management information is

an underused and underdeveloped intervention that patients and interdisciplinary staff consider

potentially useful. This is a viable option in considering ways to improve pain management and

decrease poor patient outcomes from sub-optimal pain management, and HCAHPS.

Methodology

24 out of 42 RNs (57%)were interviewed before the intervention with four questions

using a Likert scale. "How often do you write on the whiteboard for pain management?": 4%

answered never, 79% answered occasionally, 17% answered frequently, and 0% answered

always. "How often do you utilize the information on the whiteboard for pain management?":

29% answered never, 50% answered occasionally, 21% answered frequently, and 0% answered

always. "How often do patients indicate that they use whiteboard information for pain

management?": 21% answered never, 72% answered occasionally, 0% answered frequently, and

17% answered always. "Do you feel that the using the whiteboard helps in your communication

with the patient for pain management?": 8% answered never, 54% answered occasionally, 21%

answered frequently, and 17% answered always. These results show that RNs overwhelmingly

use whiteboards for pain management occasionally but not as a stable component of pain

management communication, although a significant portion felt that it was helpful (see Appendix

E)

Over two days and two shifts,11 patients were available to question. 27% had no

knowledge of their pain management plan, 36% had a little, 18% felt that they often had

information, and 18% felt they had total knowledge. 18% were not comfortable asking for pain

medication, 9% felt a little comfortable, 18% felt mostly comfortable, and 55% felt totally

comfortable. None felt not included in their pain management plan, 55% felt a little included,

36% felt included often, and 9% felt totally included.36% did not look at the whiteboard for pain

management information, 36% looked a little, 18% looked often, and 18% looked always (see

Appendix D)

I questioned seven occupational and physical therapists working on the floor. 14% had

occasional knowledge of pain management schedules before talking to the patients, 29% said

they discussed it with the RN, while 57% did not know at all. 18% occasionally used the

information on the whiteboard for pain management, 43% only used the pain scale section on the

board and 14% did not use the board information at all. 14% felt the whiteboard helped

occasionally in communication with and treatment of the patient, 14% felt that it frequently

helped and 57% felt that it always helped when used. 100% felt that a barrier to whiteboard use

was in lack of currency of the information and 100% commented that consistent updating would

be helpful (see Appendix F). During four days of observation, 17.5% whiteboards had pain

management schedule information, out of 50 boards observed (see Appendix G).

Using a change theory affords better understanding of how change occurs. Recognizing

patterns and motivation gives a useable framework with which to effectively plan

implementation of an improvement project. Trying to institute change without a well thought out

plan using theory increases the probability of failure (Sales, Smith, Curran, & Kochevar, 2006).

The Lewin change theory which involves three steps; unfreezing, moving, and re-freezing

(Shirey, 2013) is well suited for this project.

The unfreezing stage involves acquiring buy-in from the nursing staff, as the project has

the RNs recording and updating the whiteboard information. Nursing interviews revealed

barriers to the intervention including: busy workload, duplication of documentation, lack of

markers when time to record, language barriers, too many new procedures enforced in the unit,

too labor intensive, not feasible for frequent interval administrations i.e. every half hour, "drug-

seeking" patients, patients with mental or visual challenges, whiteboard too full of irrelevant

information already, lack of patient interest, and usefulness. I attended four shift huddles (two for

12-hour day shift and two for 12-hour night shift) wherein I explained the project. I provided a

posterboard (see Appendix L) with: my picture, experience summary, contact information,

explanation of the intervention, evidence based practice references, process maps for change of

shift and during shift, and Post-Its with pens for staff comments. Pamphlets were created with

the same information for ready reference (see Appendix K) In this way I hoped to convince the

staff of the urgency and benefits of the intervention and its legitimacy. The process maps

addressed the time and lack of markers barriers while showing how using the whiteboard in this

manner could easily be incorporated into the present workflow (see Appendices I & J) Putting

the results of the patient and interdisciplinary questionnaires on the board was another

convincing point. I personally put markers at every whiteboard. I could not affect the whiteboard

template, as the institution already had new whiteboards set up. I provided bakery treats at these huddles to encourage attention to my spiels, and small candy treats with the health care workers' surveys.

The moving stage involved shadowing volunteer nurses on their shift on five episodes for five to six hours each. During this time, I reminded and facilitated pain medication schedule recording., and gave each nurse a small thank you Starbucks card. This has helped to demonstrate that the intervention can be successfully incorporated seamlessly and only adds a minute to time expenditure. Barriers identified in feedback were: adding the intervention in addition to documenting on the EMR can be overwhelming with a busy assignment, remembering to record on the whiteboard, and pens and erasers often not immediately available. Overall, the RNs participating felt the intervention was useful and easily incorporated. Staff suggestions were to use: dark markers, boards without obstructing glare, and simpler boards that are easier to read.

The re-freezing stage needs more time and culture work than allowed for this project. It will consist of the staff expecting the information to be present and accurate when their shift starts as a usual practice.

Once the new boards were implemented, whiteboards were audited for usage (Appendix G) and compared to medication charting for accuracy (see Appendix H.) Post-implementation patient (Appendix D) and RN surveys (Appendix E) were conducted to capture any changes. The ultimate goal is for 90% compliance and accuracy by April 28, and 5% improvement in inpatient perception of pain management by the July-September 2016 HCAHP capture.

Data Source/Literature Review

The focus of this intervention is a post-surgical medical unit in a large community hospital. At present, the unit has a 21 bed capacity with 42 RNs on staff. Shifts are 12 hours from

7-7, with three RNs filling in with eight hour shifts. RNs may be floated to other medical floors in four-hour increments. This is a busy unit with an average daily census of 19.8 inpatients daily and an average length of stay of 3.2 days (work files of Manager of Patient Care Experience, January 29,2016). 45% of the RN staff have been at the institution for 1-5 years, 26% for 6-10years, and 9.5% in each of the categories of 11-15 years, 15-20 years, and greater than 20 years (records from human resources). There are three nurse's stations, one with six tele-monitors. There is one medication room with two dispensing machines containing stock medications and patient lists. Nurses have to queue to access medications. Each nurse has a portable work station computer with a barcoder that can be wheeled about. Work stations and barcoders need batteries which can are recharged and stored in two different rooms. Partial paper charts contain signed forms such as consents which are scanned into the electronic record at a later time by the records department. All RNs and techs have Vocera communication systems. Clean supplies and dirty utility rooms are small and crowded. There is a conference room housing copy machines, two computers, printed forms, and stationary supplies. The lounge has a bathroom, lockers, small conference table for shift huddles, wall space for announcements, and large windows with a view. There are no staff meetings or interdisciplinary rounds. RNs generally start out with four patients and are usually open for an admit if the census is not full. The charge RN does not have a patient assignment. There is generally a resource RN for break coverage and whatever assistance may be needed such as blood sugar checks and other help, and one ward clerk. There are 14 total nursing technicians working 12-hour shifts with five patients per assignment. Patients are admitted from the emergency department, voluntary pre-op, and post-op from the recovery unit. The floor accepts county prisoners, handcuffed in a private room with three police personnel. Assignments are made by the departing charge RN using pre-printed hand-off templates with patient stickers. Report is given at the bedside unless contra-indicated. Census and assignments are on a whiteboard at the main nurse's station. There is an office for case managers and another shared by occupational and physical therapy.

HCAHPS as previously mentioned, provided the impetus for the project and a source of

metric measurement for assessment and goal. Patient, RN, and interdisciplinary questionnaires

provided the assessment of the present state of pain management and the utilization of the

whiteboard. These inquiries will be repeated post-intervention to assess if any progress has been

made. Shadowing both shifts on four occasions provided both a first-hand view of RN workflow

and an opportunity to assess how the intervention could be accommodated efficiently.

The PICO statement used was: In an adult post-surgical patient on a post-surgical floor, can use

of the whiteboard to communicate prn medication due times increase patient satisfaction with

pain management as compared to not using the whiteboard?

The 11 articles in this literary review range from 2009 to 2015 and give information on

the problem of pain management, the roles of communication between healthcare professionals

and the patient in pain management, the use of whiteboards in pain management, and the specific

benefits of recording pain medication times given and available on the patient whiteboard.

Searches were done on Fusion, CINAHL, Medline, Google Scholar and Pub-Med using key

words; nurs* pain management, pain management, whiteboard*, pain communication, surgical

patient, and inpatient pain. References were also found by looking at lists of references from found

articles, and asking colleagues for reference information.

Bell and Duffy (2009) elucidate barriers for pain assessment and management in their literature

review *Pain Assessment and Management in Surgical Nursing: A Literature Review.* They

indicate that pain continues to be a problem despite advances in treatment strategies, impeding

patient healing and even delay discharge. They contend that education alone will not improve

management, but rather improvement projects and clinical audits will.

Glowacki (2015) in her article *Effective Pain Management and Improvements in*

Patient's Outcomes and Satisfaction relates effective pain management to improved patient

outcomes and satisfaction using the National Database of Nursing Quality Indicators following

participation in a study from Mercy Hospital of Buffalo, Buffalo, New York.

In *Evaluating the Influence of Perceived Pain Control on Patient Satisfaction in a*

Hospital Setting, Craig, Otani and Hermann (2015) assert that nursing care has the highest

impact and correlation on pain management satisfaction with nursing communication skills a

priority for improving nursing levels of care. They used HCAHPs and questions mailed to

patients regarding their experiences, from 32 not-for-profit hospitals in the United states.

Kastanias, Robinson, Sabo, and Smith (2009) conducted a descriptive quantitative study,

What Do Adult Surgical Patients Really Want to Know About Pain and Pain Management? using

day surgery patients surveyed by telephone 72 hours after discharge. They conclude that patients

strongly desire information on pain and its management, including pain expectations.

A literary search by Manias (2010) *Medication Communication: A Concept Analysis*

investigates medication communication with an emphasis on nursing. She analyzes important

aspects of nurse/patient/ family communication identifying necessary transparency in the

collaboration with patients for implementation of care.

Massaro's (2013) *Whiteboards: An Innovative Tool for Patient-Centered*

Communication, is a short summary of findings from a convention of The Association of

Women's Health, Obstetric, and Neonatal Nurses. The author finds that use of whiteboards

improved communication in an obstetric ward with positive patient reactions.

Sehgal, Green, Vidyarthi, Blegen, and Wachter (2010) study, *Patient Whiteboards as a*

Communication Tool in the Hospital Setting: A Survey of Practices and Recommendations,

surveyed nurses, bedside nurses, internal medical staff, and hospitalists in three medical units at

UCSF medical center regarding whiteboard use and its impact on patient care. They assert that

whiteboards improve communication amongst the healthcare team and with the patient. They recommend auditing use and incorporating feedback as important for success.

Singh, et al. (2011) conducted a study, *It's the Writing on the Wall: Whiteboards Improve Inpatient Satisfaction with Provider Communication.* Whiteboards were placed in four medical wards in a 430-bed urban academic medical center with Press-Ganey scores obtained before and after placement. Seven surgical wards were also surveyed without the use of whiteboards as a natural experiment.They postulated that whiteboards promote communication and are an effective route for information sharing among patients and staff.

Tan, Evans, Braddock, & Shieh (2013) study, *Patient Whiteboards to Improve Patient-Centered Care in the Hospital,* found that whiteboards help with staff communication and patient satisfaction. They conducted a three-week pilot of whiteboard use involving multi-disciplinary use and 104 inpatients. Surveys were done on 56 inpatients with whiteboards and 48 patients without, along with surveys of 40 healthcare staff. Whiteboards became visual reminders regarding plans of care.

Dearmon, et al. (2013) examined the effectiveness of a Transforming Care at Bedside initiative on a nursing floor in their study, *Transforming Care at the Bedside (TCAB): Enhancing Direct care anad Value-Added Care.* It is a descriptive comparative study comparing a unit with care as usual against a unit whose staff tested, adopted, and implemented improvement projects. The specific intervention of recording pain medication time given and next available time on patient whiteboards was included.The boards were named "pain boards" and within a week, there were dozens of positive patient and family feedback instances.

Lavoie-Tremblay, et al. (2014) published their study, *The Effect of Transforming Care at the Bedside Initiative on Healthcare Teams' Work Environments* to determine the named effects.They used a pre-test and post-test design with healthcare workers from four units in a

university healthcenter in Montreal, Canada.Specifically, nurses directly participated in

initiating, testing, and implementing bedside innovations, including patient whiteboards as a tool

for nurse/patient communication.This communication parameter improved despite the challenges

of sustaining an improved working environment in the context of many other hospital-directed

changes at the time.

The Alaloul, Williams, Dlauren Jones, and Logsdon (2015) study, *Impact of a Script-*

Based Communication Intervention on Patient Satisfaction with Pain Management, uses a three-

pronged nursing pain management intervention of: nursing scripted communication, hourly

rounding, and patient whiteboards. Whiteboard communication includes pain medication

schedules and pain scores.They used a prospective quaasi-experimental pre-test post-test design

in two units with medical-surgical patients.Both units have an average of 22 patients with an

average length of stay of four days. One unit implemented the interventions and the other had

usual care.All patients were eligible for the study and 90% compliance was achieved. The

authors found that HCAHPs related to patient satisfaction with pain management improved after

intervention implementation as a result of the facilitation of clear and consistent pain

management communication.

This literature review indicates the need for pain management to be improved, as pain is

still a significant problem despite years of research spent on understanding and addressing it.

Inadequate management negatively influences patient outcomes such as delayed discharge,

disrupted healing,and nosocomial conditions. Institutional financial burden is augmented by

dollars spent on treating these outcomes and decreased governmental and insurance re-

imbursement. HCAHPS are seen to be a valid indicator of health care's present state of efficacy.

Nursing care is pinpointed as a major factor in pain management, with communication skills

paramount in that care. Use of whiteboards in general and the recording of pain medication times

specifically, is implicated in improving health care team (including the patient/family)

communication and patient satisfaction with pain management.

Timeline

Preliminary planning and research started the last week of Jan 2016, including literature

search on pain management, attending institutional safety meetings, and meeting with preceptor,

CNL on another floor, and targeted unit manager. The first two weeks in February consisted of

introducing myself to the floor, direct observation of unit workflow, and using developed

questions for RNs and patients for assessment of pain treatment processes. In the third week of

Feb., I presented the proposed project at shift huddles along with a posterboard with information,

references, pictures, and contact information. Post-its and pens were provided for staff to leave

comments on the board. In the last week of Feb. I narrowed down the focus of the project to the

recording of pain medication scheduling on patient whiteboards with additional research. I

developed and implemented targeted RN, OT/PT, and patient questionnaires regarding use of the

whiteboard for pain management communication. In the first week of March I updated the

posterboard with data from the questionnaires and developed pamphlets with pictures, referenced

information and process maps which I distributed to the RNs at shift huddles. The second week I

initiated two PDSA cycles by shadowing and directing one RN at each shift at shift hand-off

time, providing a form for feedback recording. By the third week of Marc, the forms were not

returned so I again initiated two PDSAs as I shadowed for five to six hours to insure teaching

and compliance, obtaining immediate feedback at the end of the sessions. The third week of

March involved re-organization of the plan to fit organizational needs. In the first two weeks

April I audited board usage for compliance and compared with MARs for accuracy, since the

intervention has no use if not current. HCAHP scores should be followed to see if patient

satisfaction with pain management has improved, but the semester ends before capture and

tabulation. (Appendix M)

Expected Results

The goal is to achieve 90% compliance of whiteboard pain communication and improve

patient perception of pain management by 5% indicated by HCAHPS. The barriers of material

availability (markers and erasers personally supplied from unit stores), time used and workflow

(process maps and one-on-one shadowing and instruction) have been addressed. However, other

barriers may interfere with progress. The RNs involved in the PDSAs seem to be convinced in

the value of this intervention, but none are willing to be champions. The manager and staff

verbalized their feeling of being overwhelmed by the extent of concurrent institutional change

projects, although I have emphasized the ease, feasibility, potential benefits and the need to

improve patient satisfaction with pain management. The staff feel that they are expected to

integrate many new processes and procedures into a workflow already replete with demands due

to increased patient acuity, without additional support. They feel that staffing does not reflect this

increase in responsibility. In addition, many of these changes have not incorporated their input,

thereby introducing disruptions into their workflow. I do think that HCAHPs will improve as my

focus on pain management will help not only in the intervention, but in the atmosphere of

working on patient-centeredness and participation in planning a pain regimen.

Nursing Relevance

The American Association of Nursing (n.d.) defines nursing as: "Nursing is the

protection, promotion, and optimization of health and abilities, prevention of illness and injury,

facilitation of healing, alleviation of suffering through the diagnosis and treatment of human

response, and advocacy in the care of individuals, families, groups, communities, and

populations.". As discussed in this paper, increasing the communication skills of RNs with

patients and other members of the health care team in the realm of pain management is an

application of these parameters. Confirmation of the medication schedule may lead to more

conversation regarding the pain plan and patient questions, knowledge and involvement. Using

the whiteboards as easily updated visual cues to the current state of pain medication schedules

will decrease nursing time spent providing that information to patients and team members.

Patients may be more comfortable asking for pain relief when they know next availability. Their

confidence in the team may increase when they know that everyone is on that same page.

Summary Report

The aim of the project is to improve pain management as exemplified by improved

patient perception HCAHPS, by using the patient whiteboards to record accurate pain medication

last given and next available times. This mode of communication reflects patient-centeredness

and transparency. The project was carried out in a community hospital on a post-surgical floor

with a 21 bed capacity. The hospital already used patient whiteboards, but were going to deploy

new templated ones with a designated area for this information. It was not usual practice for the

RNs to use the whiteboards in this manner.

The first steps involved assessing the floor. A 5 P's assessment: purpose, patients,

professionals, processes, and patterns (Nelson, Batalden, & Godfrey, 2007) . A SWOT analysis

(see Appendix B) and a fishbone diagram analyzing the causes of low patient perception of their

pain management (see Appendix A), were used to evaluate the workplace environment and

pinpoint a workable focus. I met with the RN manager to inform her of my intent to address pain

management on her unit and obtain her cooperation. Short RN surveys were given to evaluate

RN perception of pain management on their floor (see Appendix C). The 14 RNs in the survey

averaged 7/10 for how well pain was treated and 6.6/10 for feeling supported in pain

management. This was in contrast with HCAHPS ratings for a pain always being well-controlled

and staff always doing everything they could to help with pain, below national 50% benchmark

in the October to December 2015 records (Professional Resource Consultants, Inc., 2016).

Shift huddles in the staff lounge were the access points for explaining the project and providing staff education, since there are no staff meetings on this unit. Shadowing the staff was critical to understanding how pain management was implemented, and the presence and effects of the barriers. The lounge board and pamphlets re-enforced project processes and easily referenced information given in the verbal presentations. They were personally handed out, with the rest left at the board.

Post-implementation surveys and audits did not result in the metric values hoped for, but there was some improvement (see Appendix D). The percentage of patients knowing their pain management plan improved, as did the percentages for: feeling included in the plans, using whiteboard information, and feeling comfortable asking for medication. RN surveys revealed increases in writing, using, and perceptions of intervention utility. There was no significant change in RN perception that patients indicated use of the information (see Appendix E) These improvements appear authentic but may be inaccurate due to barriers in collecting comparable pre-and post-intervention data points.

There were barriers to the project. The hospital is in the middle of cultural and procedural modifications in an effort to address pay-for-performance and patient-centered models, inundating staff and middle-management with many changes. Initially the project was explained to the floor manager and her consent was verbally obtained. She requested minimal involvement due to her workload. As the project progressed, the manager misinterpreted the requirements and goal despite a few updates. One-on-one sessions did not remedy the situation. My preceptor spoke with the floor director, and a compromise was reached. I scheduled three days in which to obtain post-implementation data, resulting in a possible skewing of data as fewer data points were collected than anticipated. My recommendation is to have a more formal meeting with the manager in which clear expectations and a tentative schedule can be agreed upon and perhaps printed out.

The floor has no staff meetings due to an unsuccessful history of poor attendance and staff interest, resulting in wasted overtime expenses. This lack is an important barrier to information dissemination. I addressed this with spiels at staff huddles for both shifts, one-on-one short talks with staff during surveys and an informational poster board in the lounge with facilitation of staff input, and informational pamphlets. The personal asking of survey questions was preferred to placing surveys in mailboxes. My colleagues have related many instances of lack of participation using unattended surveys. Staff are very busy and if they perceive that the student is attempting to make participation easier, they seem more likely to respect the effort. I feel that as staff are more empowered and involved in unit proceedings and changes, staff meetings will be an important tool in culture change and improved outcomes. The CNL as a transformational leader will be a compelling force for effective staff meetings and cultural change.

Champions could not be found for the project and thus PDSA's were conducted in a limited time frame by personally shadowing volunteer staff to give first-hand experience of the intervention. This was very effective (according to feedback) in addressing staff fears regarding imposition of an additional task needing time and preparation. In addition, value was reinforced by sharing positive feedback from patient and multi-disciplinary inquiries. Many of the patients said they would increase use whiteboard information if it were accurately updated. This was also feedback obtained in the multi-disciplinary query.

A common barrier mentioned by staff was the lack of markers and erasers at the whiteboards. This was addressed in the process maps, but I went on to personally place the items. The hospital is currently in the process of deciding on a secure holder for the boards to store and access the materials. Staff also complained that the usefulness of the new boards was compromised by glare and a confusing busy design. These barriers could have been avoided by enlisting end-user input and PDSA's. This is a deep cultural change that needs CNL guidance.

An interesting consideration in this project was the RNs assessment of patient capability to benefit. RN feedback pointed out that some patients feel reluctant to ask for pain relief outside of the written schedule. This may be addressed by educating them as to the goal of the whiteboard. Other patients may fixate on the schedule without relating it to their pain needs due to their cognitive issues, i.e. asking for the medications per interval when they have no pain, The RN as clinician must assess if this is the correct pain management mode for them. This must be weighed against benefit for the family and the rest of the team.

Sustainability of any improvement project requires commitment of the staff and management to its procedures and surveillance of its metrics. In this case, the microsystem culture does not yet embrace transformational leadership. The new intervention needs champions to promote value and implementation. Audits of whiteboard usage and accuracy can provide the data to create graphs showing progress. The new templated whiteboards have specific indicated areas, which are visual reminders. However, without frequent and timely personal prompts, the staff may just ignore the reminders as they are presently doing. A good time for champion influence would be at shift handoff, especially when done at the bedside where the patient can be involved with continuity of care. CNAs can be involved by being responsible for marker and eraser availability when they check vital signs.

At the beginning of this project, I had high expectations for intervention implementation. My research showed clear benefit and the intervention itself is simple and quick. However, even simple changes must be supported by more complex structure as in the proverbial iceberg. In an environmental context of many concomitant changes, improvement projects can succeed if front-line worker input is appreciated and encouraged (Dearmon, et al., 2013; Lavoie-Tremblay, et al., 2014). Being a student not employed at the site,I conceivably had little little weight in influencing actual change in practice. Yet, when I was allowed direct personal access, staff were more able to experience the meaning of what was being proposed, with some measure of metric

improvement. This points to an essential skill of a CNL in transformational leadership with

personal relationships and communication. Research and data are powerful tools in unfreezing,

but moving needs energy. The CNL has the ability to construct an overall view of the gears of

the microsystem and unlock that energy in the stores of stakeholders motivated by a unified will

and vision.

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Appendix A

Fishbone Diagram of Causes and Effects
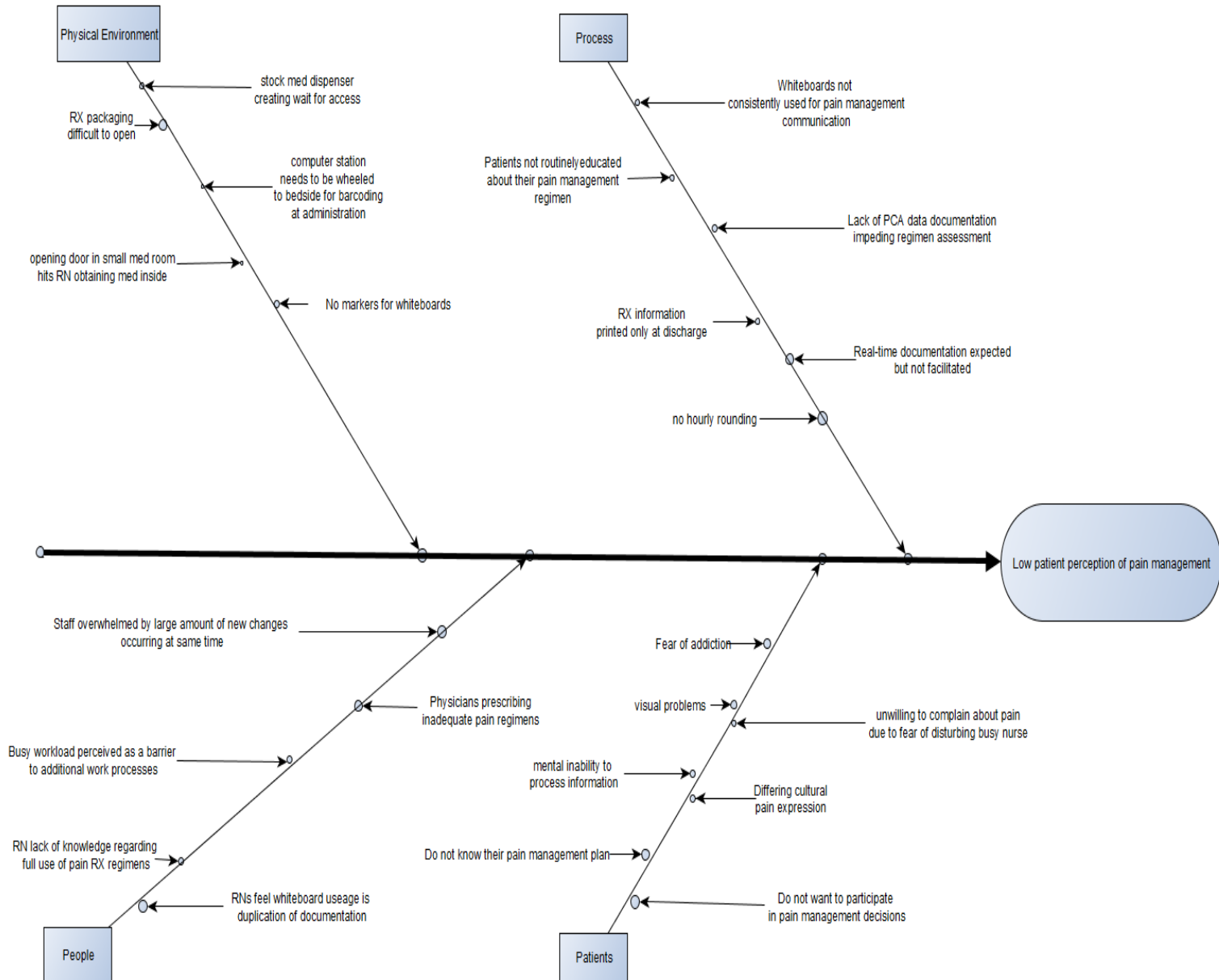
Appendix B

Unit SWOT Analysis

Strengths	Weaknesses
Skilled Staff Community Based Hospital Other disciplines willing to give information New CNL on another floor Student willing to help	Busy workflow Dissonance between management and staff Contentious labor relations Cumbersome physical environment Too many concurrent improvement projects Staff reluctant to change Low HCAHP scores for patient satisfaction with pain management
Opportunities	**Threats**

Evidence-based practice trend in healthcare
Rapidly aging population needing more
   surgeries
Patient centered care model trend in
   healthcare
Increased patients access to healthcare
   secondary to health reform legislation
	Competing hospitals using electronic
	   whiteboards
	Nursing shortage
	Nursing care considered cost vs. investment

Appendix C

RN Assessment of Unit

2/16/2016
RN Unit Assessment for Pain management on a Scale of 1-10
in Ascending Order n=13
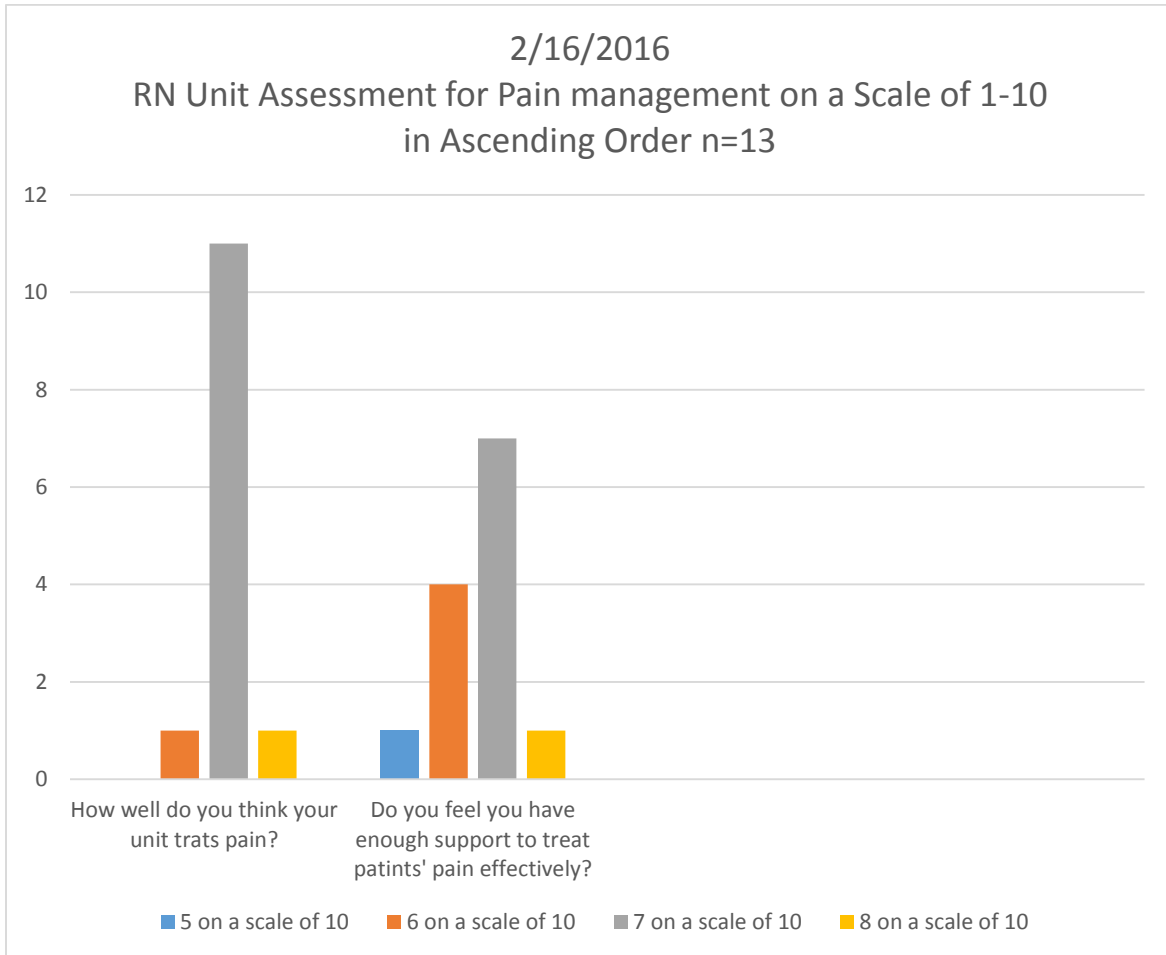
Appendix D

Patient Questions

Pre-Intervention Patient Questions n=11

Post-Intervention Patient Questions n=25

Appendix E

RN Questions

Pre-Intervention RN Questions n=24

Post-Intervention RN Questions n=11

Appendix F

Pre-Intervention Multi-Disciplinary Staff Questions
n=7
3/8/2016

Appendix G

Whiteboard Recording of Pain Medication Times

Appendix H

Post-Implementation Accuracy of Pain Medication Times
Recorded on whiteboards n=14

■ Accurate   ■ Not Accurate
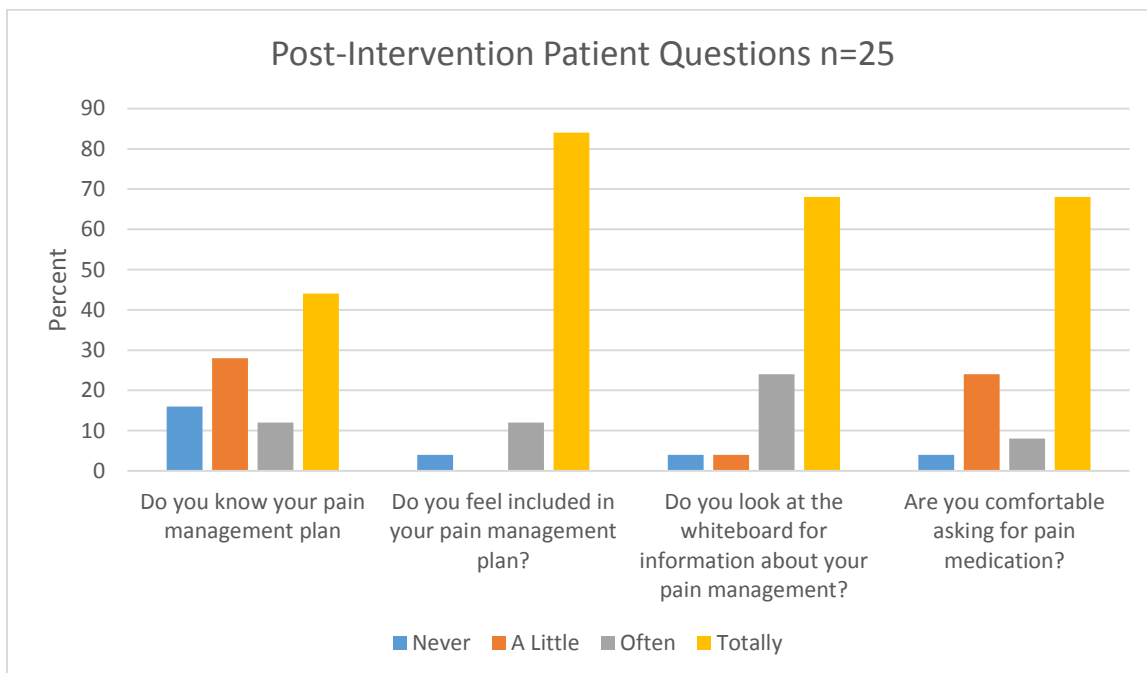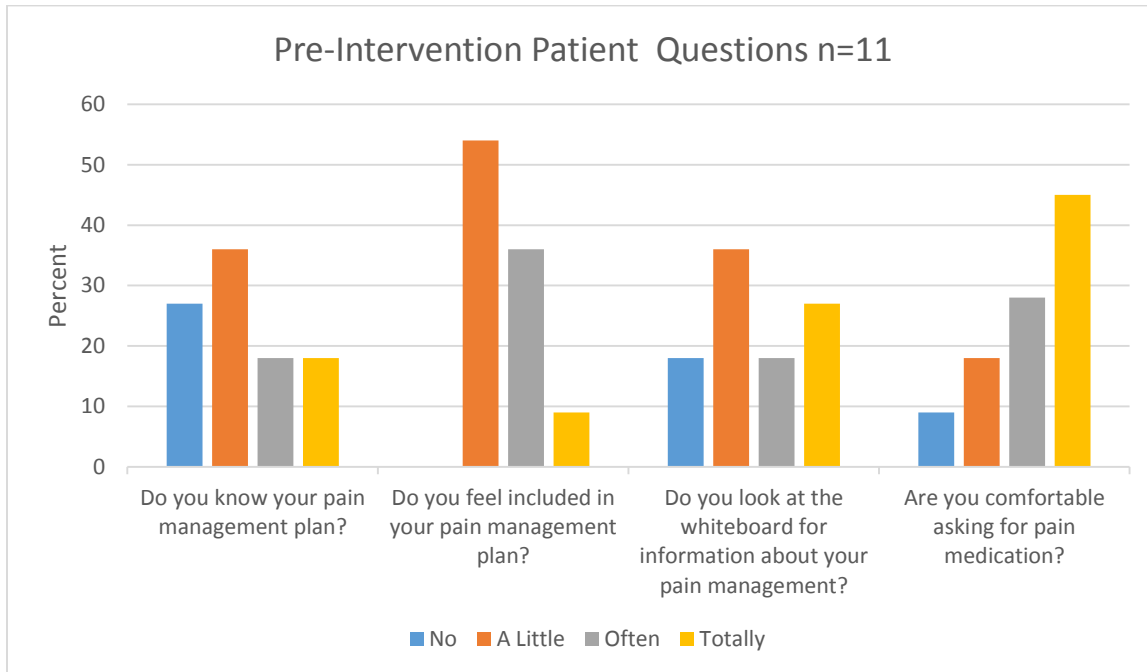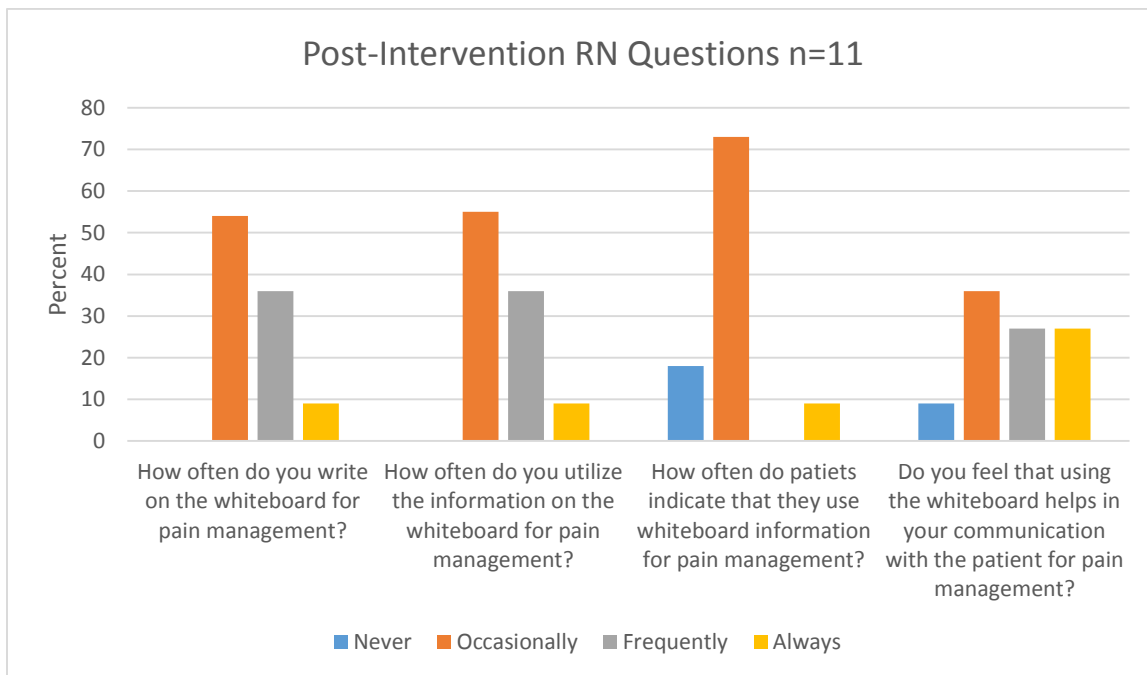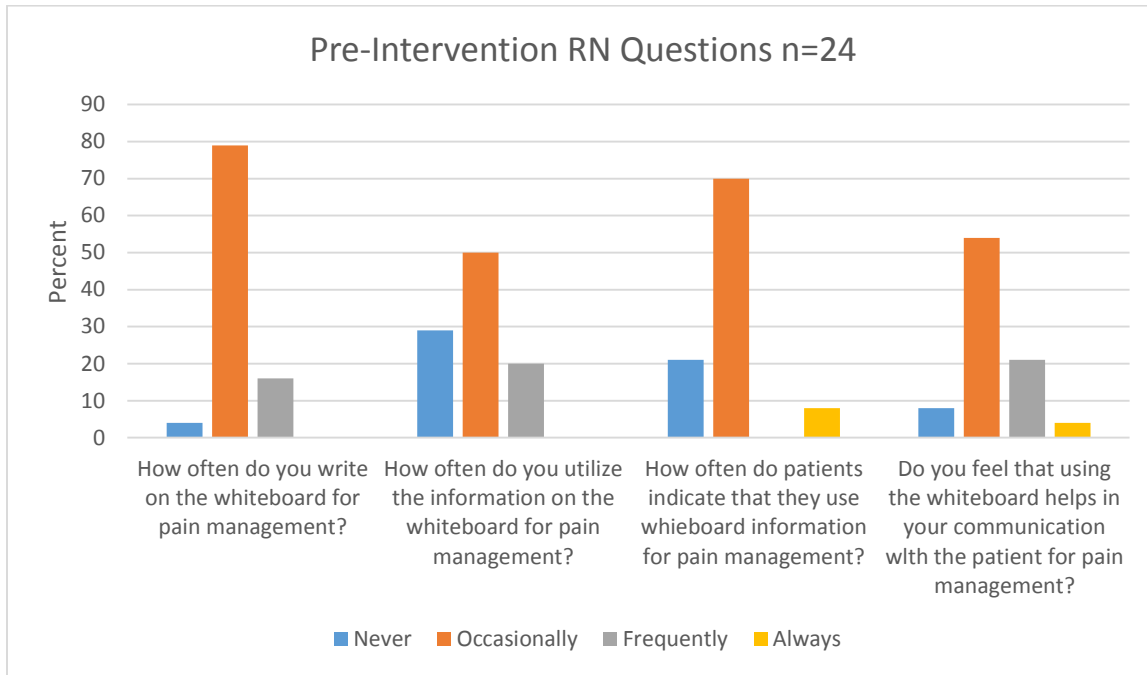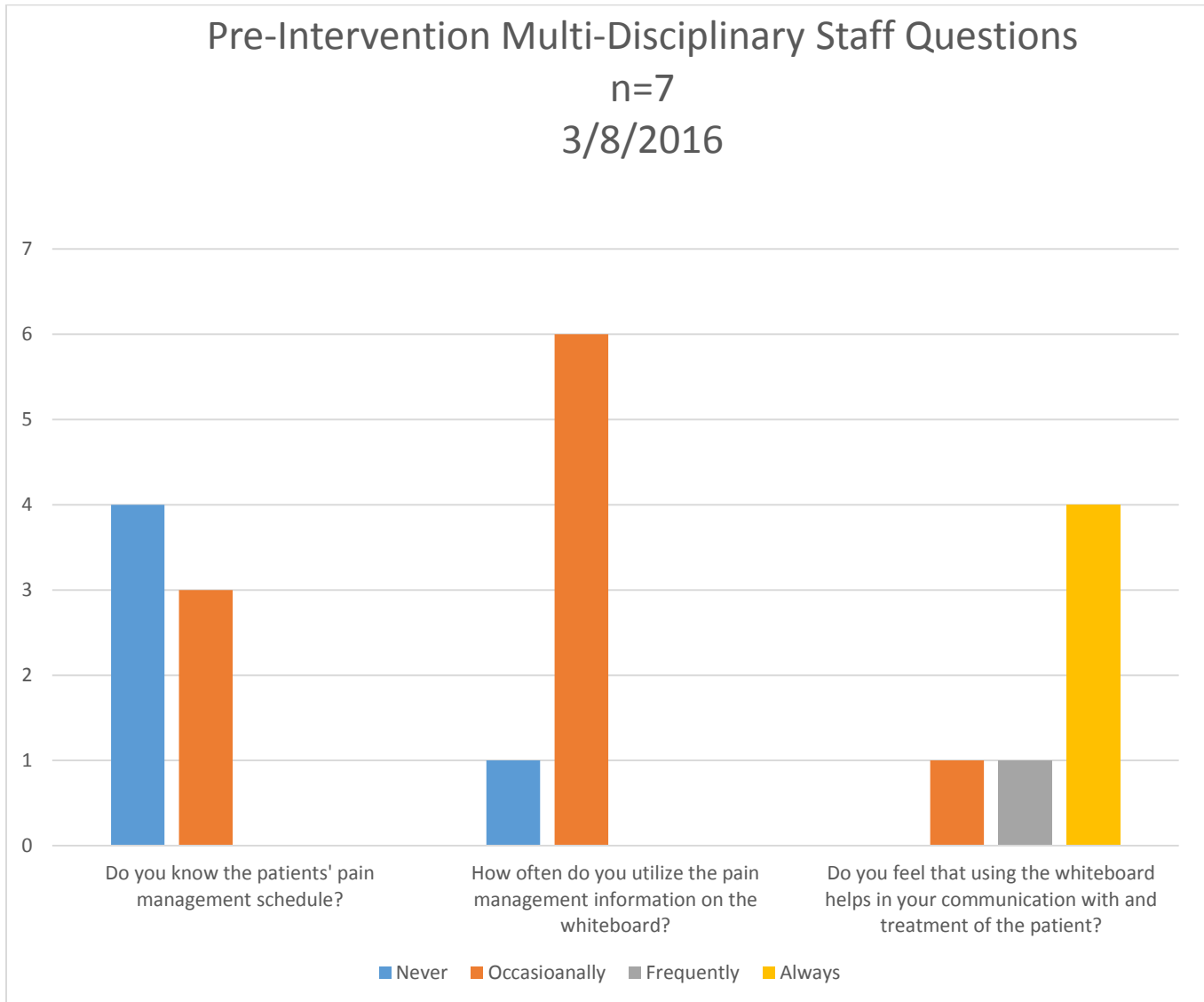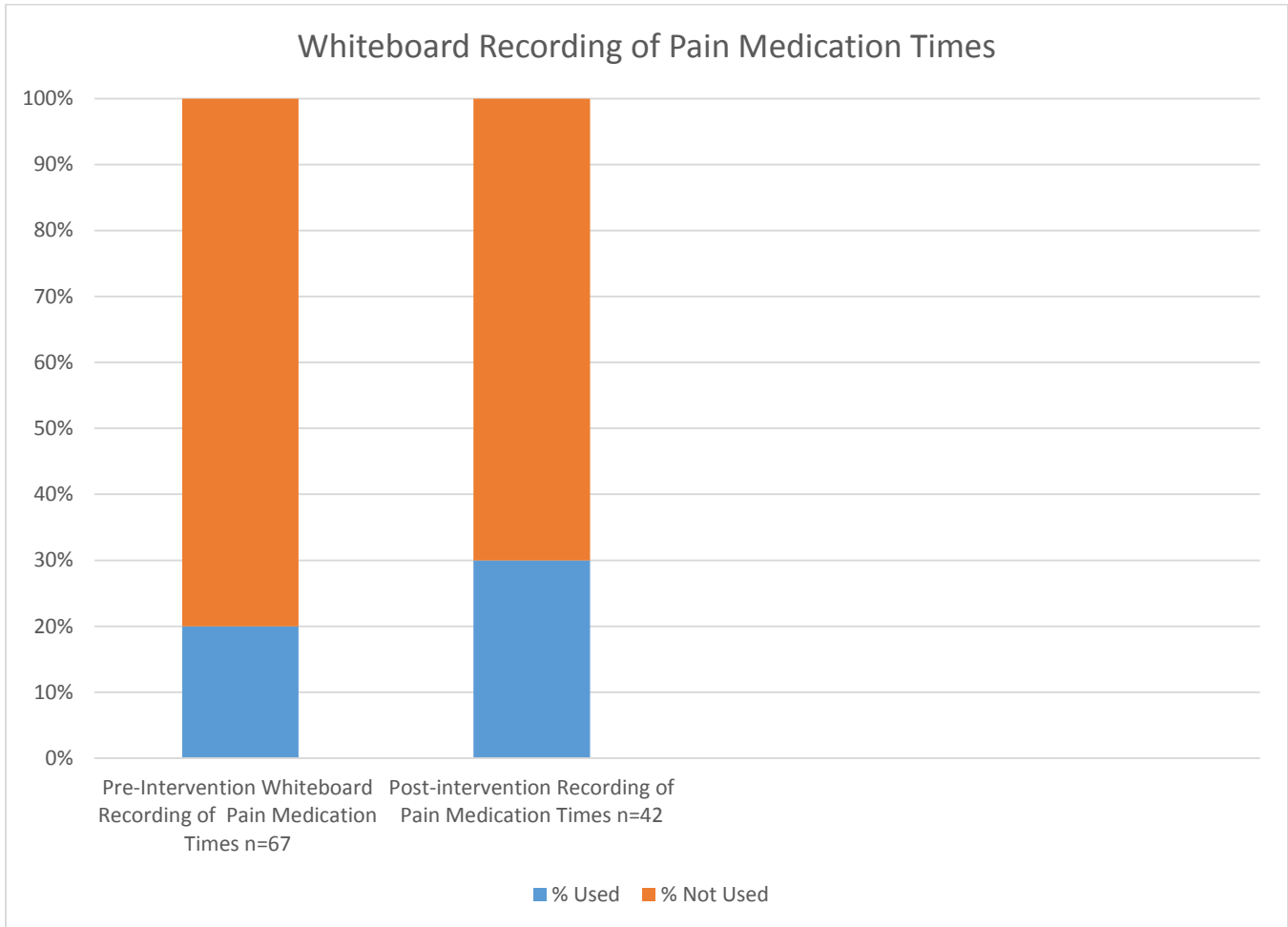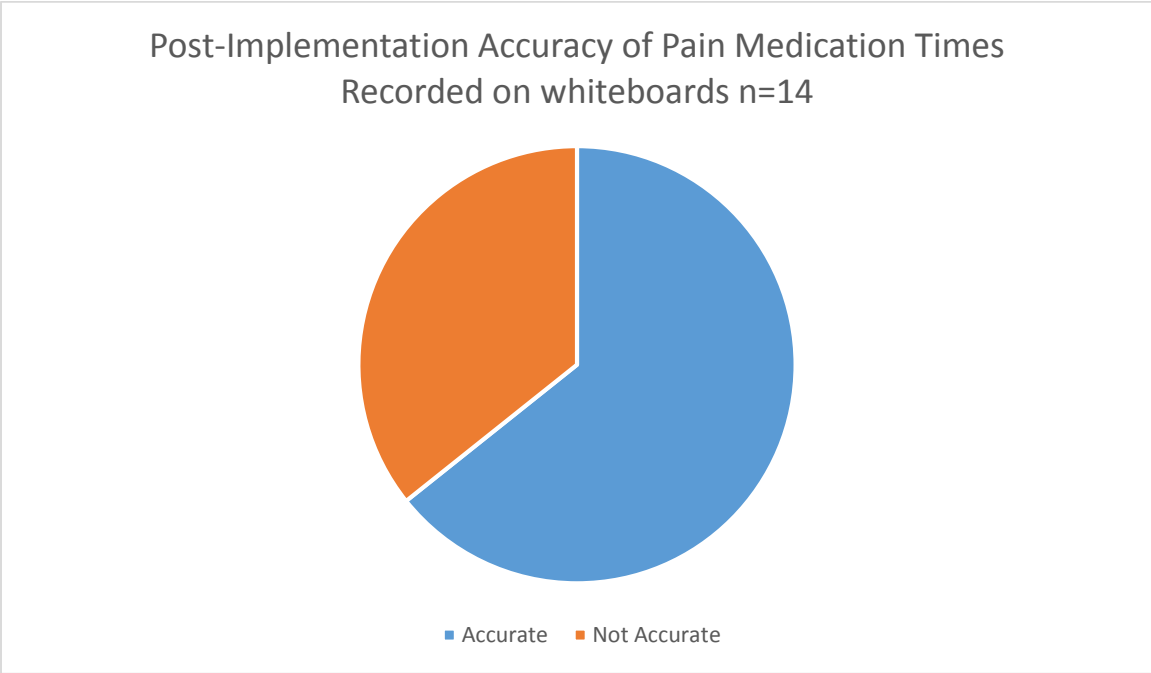
Appendix I

Shift Change Process Map
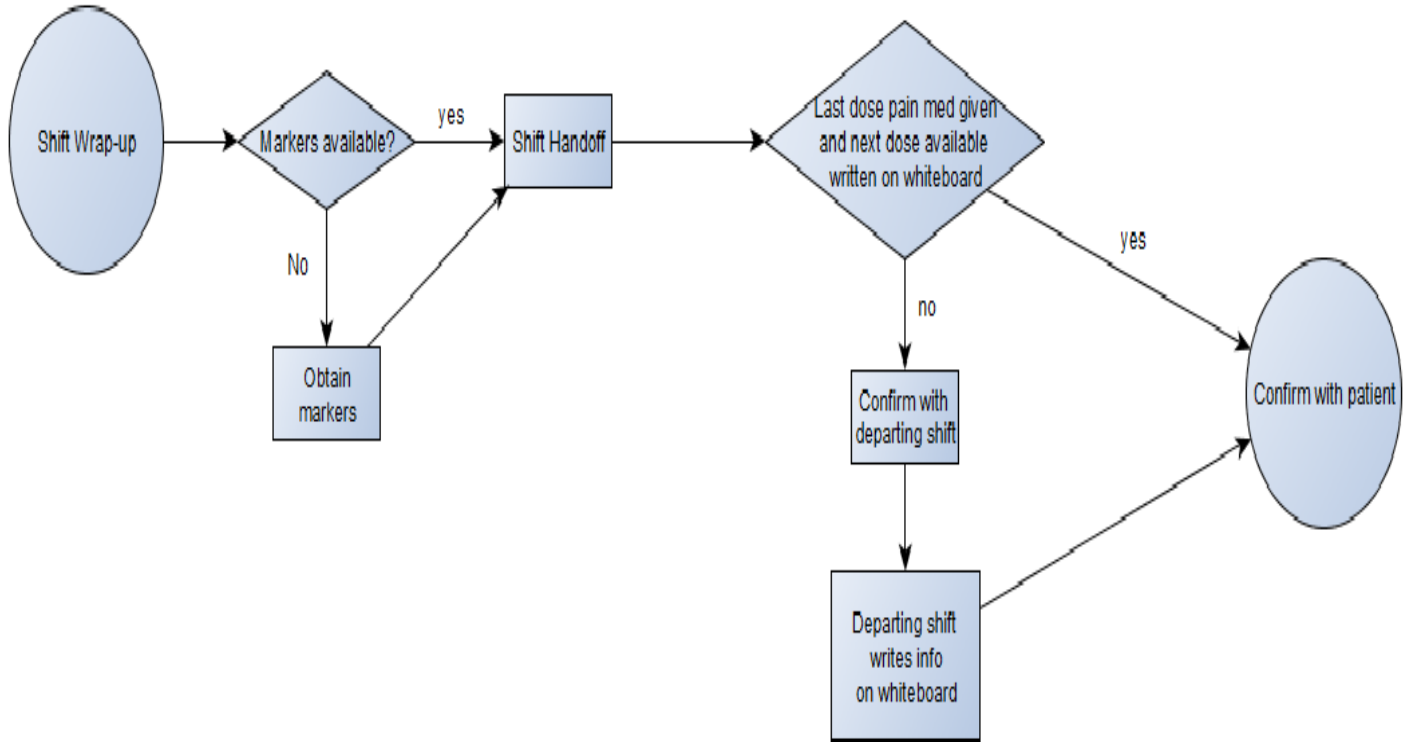
Appendix J

PRN Shift Process Map
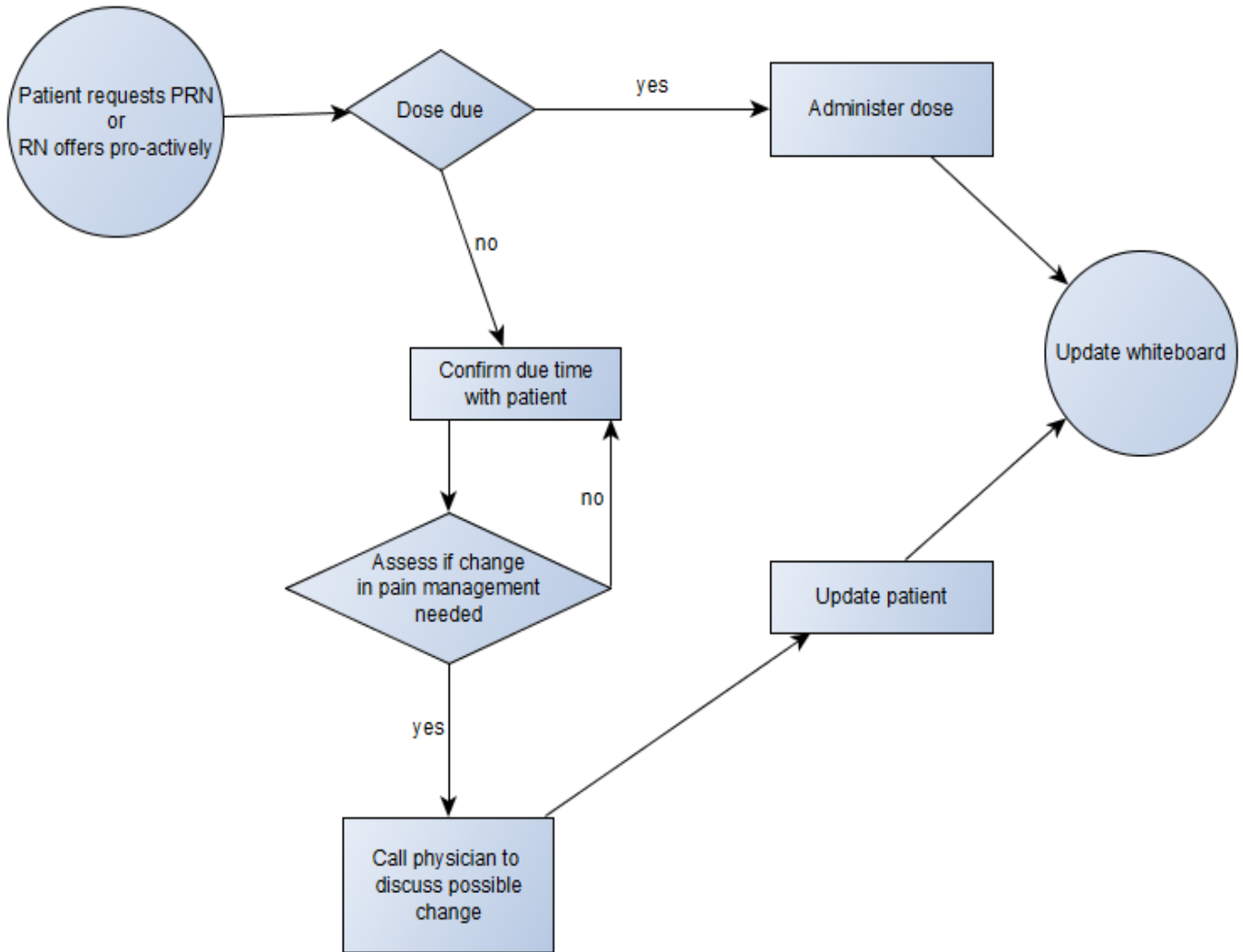
Appendix K

Front and Back of 4-Fold Educational Pamphlet

Appendix L

Posterboard in Staff Lounge

Appendix M

Gantt Chart

	Begin date	End date	Jan - 16	February 2016	March 2016	April 2016
Writing Pain Medication schedule on Patient Whiteboards	1/25/16	4/22/16				
Preliminary planning and research	1/25/16	1/30/16				
Assessment of microsystem	2/1/16	2/13/16				
Present Project at shift huddles	2/15/16	2/16/16				
Pre-project data collected	2/16/16	2/20/16				
Research and focus narrowed	2/22/16	2/27/16				
Posterboard Updated with assessment data Pamphlets developed	2/29/16	3/5/16				
Initiated 2 PDSAs	3/7/16	3/12/16				
4 PDSAS	3/14/16	3/26/16				
Audit whiteboards for usage and accuracy	3/31/16	4/9/16				
Post-project RN and patient data collection	3/31/16	4/9/16				
Compile data and write-up report	4/11/16	4/22/16				

Appendix N

Cost of Iatragenic Conditions in Dollars

Iatragenic Conditions

0   5000   10000   15000   20000   25000   30000

- Decubitis Ulcer
- Pneumonia & Other Lung Iinfections
- Venous Thrombosis
- Post-Op Infection & Deep woound Disruption without Procedure
- Stroke % Intercranial Hemorrhage
- Other Pulmonary Complications
- Acute Pulmonary Edema & Respiratory Failure without Ventilation7109
- Project Intervention

(data from Fuller, McCullough, Bao, & Averill, 2009)