

Spring 5-17-2018

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Marinov, Natalya, "Reducing Inter-Unit Patient Report Delays and Transfer Times" (2018). *Master's Projects and Capstones*. 732.
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Reducing Inter-Unit Patient Report Delays and Transfer Times

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Section I. Abstract

Inter-unit coordination is essential in preventing a bottleneck in patient flow and its resultant stresses to staff, hindering quality patient care, and wasting time. The Medical-Surgical Unit (MSU) and Post Anesthesia Care Unit (PACU) struggle to establish efficient patient report times and transfers. Preliminary data demonstrated report delays attributed to an arduous workload and overburdened MSU nursing staff. The project's objective focuses on reducing nurse-related report time delays by 10%, increasing understanding and teamwork, promoting proactive thinking to manage workflow efficiently, improving patient flow, and improving the inter-unit relationship between MSU and PACU. Increasing awareness and reducing transfer times are important for maintaining patient flow. Project interventions included the following: (1) MSU staff education about preliminary delays in transfer; (2) initiate an 8 am and 1-2 pm call times between the two units by the charge nurse; (3) continue the courtesy calls in PACU; and (4) encourage nurses to continue supporting team members. The measures include the average report times and the staff's ability to recognize the relationship of overburdened staff members and delays. Average report times of 54.5 minutes without a courtesy call reduced to 16.33 minutes with the courtesy call intervention. Utilizing the System Thinking Scale demonstrated an increase in the system thinking approach among the MSU and PACU staff. Overtime costs supersede the cost of hiring one more staff nurse to improve patient flow, lessen all staff workload, and decrease turnover rates. The findings demonstrate a need for increased staffing, further research of inter-unit report delays, and initiatives to continue teamwork efforts.

Section II. Introduction

Inter-unit patient transfers are complex in such it employs multiple parts working synchronously to be efficient. Like cogs in a machine, breakdown of one cascades down the process creating chaos. Coordination between units is essential in avoiding a bottleneck in patient flow. A bottleneck in patient flow creates additional stresses to the staff, hinders quality patient care, and wastes time. From the organizational standpoint, a patient flow gridlock impedes its ability to profit and provide patient-centered care. Movement is money.

Each microsystem has its own work culture that requires unique understanding and sensitivity. Clashing of microsystems (units) can impede communication and workflow. Communication breakdown is one aspect hindering patient flow within the focus of inter-unit patient transfers. Other elements include resource availability, incompatible processes, and support. The intertwining of communication, resources, support, and processes demonstrate the complexity of efficient patient flow and various areas of delays.

Problem

The current problem is between the PACU and MSU in regard to patient transfer delays. MSU has a reputation of high turnovers, inadequate staffing, and a high-stress unit. Moreover, the charge nurse frequently has a patient caseload in addition to her charge nurse duties. Whenever another unit attempts to call report for a patient transfer, MSU is unable to take the report. Delays attributed to the charge nurse include but not limited to the following reasons: (a) charge nurse has not assigned the transferring

patient to a nurse on MSU; (b) the charge nurse is busy providing patient care, passing medications, or attending meetings; or (c) the charge nurse cannot be found.

In addition to the overburdened charge nurse, the nursing staff itself is too busy to take the report. Even when a nurse is assigned to receive the report for a patient transfer, the delays include the following: (a) the nurse is busy providing patient care, passing medications; (b) the nurse is too busy to take the report at this time; or (c) the nurse cannot be found. Collected data between (MSU) and (PACU) demonstrate the following: (a) charge nurse related delays (26%); (b) staff nurse delays (28%); (c) housekeeping delays (18%); (d) lack of beds (10%); (e) change of shift (4%); (f) discharge delay (4%); (g) no delays (10%). Together 54% of the report delays recorded suggest a need for change among the nursing staff of MSU.

Available Knowledge/Literature Review

The inter-unit relationship between the MSU and PACU at times becomes strained with frequent grievances related to patient transfer delays. Such strains can fester within an overwhelmed staff and negatively influence patient care, patient satisfaction, and the fiscal health of an organization (Amato-Vealey, Fountain, & Coppola, 2012). PACU has frequent complaints of the MSU's inability to take the report in a timely fashion due to various delays. MSU becomes frustrated with PACU for multiple attempted phone reports for the same patient transfer within a short period of time. One event or barrier is not independent of others. Nonetheless, delays attributed to various barriers require recognition of the interconnectedness and complexity of the problem for mitigation.

Foremost, one must recognize how the barriers of inter-unit patient transfers can dictate patient flow throughout the entire facility. Much like a domino effect, one

barrier carries its weight down on all others. Consequently, patient flow throughout any facility can experience gridlocks, especially when the bottleneck entirely and progressively obstructs movement. Clark (2005) identifies four stages of gridlock development that include the following: (a) delayed patient discharges from medical/surgical floors; (b) staff is unable to transfer Intensive Care Unit (ICU) patients out due to full medical/surgical floors; (c) hospital operates at full census in which the emergency department (ED), PACU and ICU cannot move patients; (d) new patients cannot be admitted. Delayed discharges are only part of the bigger picture.

Recognizing other factors such as operational failures is vital for hospitals to understand. Tucker, Singer, Hayes, & Falwell (2008) findings show various types of barriers including operational, communication, and staffing. Operational barriers include insufficient supplies, poor layouts, minimal storage spaces, and nonfunctioning equipment. Communication failures such as lack of advance notice about patient conditions between transfers or scheduling changes, redundant documentation, and poor coordination among physicians, nurses and secretaries (Tucker, Singer, Hayes, & Falwell, 2008). A significant operational barrier involved insufficient staffing levels as well as lacking support staff like housekeepers and secretaries. Nurses found themselves cleaning rooms and answering phone calls. Finally, non-value added-time waste includes waiting for lab results, automated medication machines running out of medications, attempting to locate lacking and missing supplies (Tucker et. al, 2008). These barriers help illustrate the complexity of patient transfer coordination within an average inpatient unit. Identifying and mitigating each barrier is essential in helping the nursing staff facilitate efficient patient transfer times.

Addressing the barriers is vital in alleviating delays yet one must recognize successful and non-effective methods for change. Kreindler (2017) illustrated the pitfalls of other patient flow improvement initiatives. Foremost, layering on additional work as part of the intervention often takes the nurse away from providing hands-on patient care, tied to the pen, documenting or attending meetings. Another pitfall is the failure to improve efficiency throughout the entire process. Improving efficiency at one end of the process, only to find the bottleneck of patient flow shifted to another place. For example, preparing the patient quickly for discharge but the patient does not leave due to transportation issues (Kreindler, 2017). Furthermore, creating patient "parking lots" in which ED patients requiring short stays are placed in transitional units. The parking lot is for patients that are neither ED appropriate nor inpatient units appropriate. The relocated patients and problem can be effective, until the bottleneck of patient flow is shifted there. Such a parking lot only multiplies the bottleneck issues by displacing inter-unit patient transfers aside without addressing the process. Kreindler (2017) continues to explain that increased capacity to accommodate more patients, without addressing the patient flow process simply expands the problem. Addressing the all barriers properly is vital in addressing patient flow and inter-unit transfers.

Reducing report time delays requires awareness, effective communication, proper support, and a teamwork group mentality. The ability to support other team members requires a certain level of awareness. The System Thinking Approach encompasses an ability to recognize, understand and synthesize the interactions and interdependencies in a set of components designed for a specific purpose (Dolansky & Moore, 2013). Application of system thinking skills can help nurses mitigate errors in practice, improve nurse priority setting and delegation, and enhance problem-solving and

decision-making abilities. Dolansky and Moore (2013) explain how system thinking is required in healthcare to improve quality and safety of care. Much like a microsystem assessment, recognizing the broader picture via systems thinking is necessary for quality improvement initiatives. Encouraging and instilling system thinking within nurses can inspire teamwork via recognition of the interconnectedness of the problem.

Quality and Safety Education for Nursing (QSEN) competencies are often instilled within new nursing graduates with the focus on individual care yet care of the system is just as important. Various reports have also called for a redesign in favor of systems of care. For example, Institutes of Medicine (IOM) reports, *To Err is Human: Building a Safer Health System* and *Health Professions Educations: A Bridge to Quality* have both called for this change (Kohn, Corrigan, & Donaldson, 2000); Greiner, & Knebel, 2003); Dolansky & Moore, 2013). Increasing the nursing staff's ability to recognize the cause and effect of the inter-unit report delays can encourage teamwork and collaboration between the two units. Mutual appreciation of respective viewpoints is critical in establishing and maintaining positive rapport, collegial trust, openness, and shared decision-making (Beach, Cheung, Apker, Horwitz, Howell, O-Leary, & Williams, 2012). Understanding each unit's external pressures and perspectives may also lead to better transitions. Without understanding and trust, a collaborative relationship can quickly degenerate (Beach et al., 2012). Thus, the nursing staff is encouraged to support each other utilizing a system thinking mentality.

Furthermore, without sufficient support and staffing, nurses can become overwhelmed, burned out, and inefficient. Overworking nursing staff is well known to contribute to nurse burnout and consequently impede patient care (Marinov, 2017). Maslach (2014), known for her research on burnout, defines burnout as a pattern that

begins with emotional exhaustion leading to cynicism and ends in inefficacy. Physical and emotional exhaustion from a demanding job could lead to the depersonalization or cynicism with negative emotions about the job, colleagues, and patients. It begins with a nurse distancing oneself from the job, cutting corners, and doing the minimum.

Burnout ends at inefficacy, where the employee questions the value of the job and value of self. No longer valuing the job and self, the employee leaves due to burnout.

Outcomes of burnout include the following: poor quality of care, high turnover rates, absenteeism, low morale and satisfaction, physical illness, personal dysfunction, inability to cope, low self-esteem, and depression (Marinov, 2017; Maslach, 2014; Rholetter, 2013).

Maslach (2014) identifies the following six areas of person-job match or mismatch: workload, control, reward, community, fairness, and values. Mismatches in any of the six areas have affinities to employee burnout. Emphasizing on the perception of fairness and reward, Maslach (2014) argues these two play a vital role in whether an employee will progress to cynicism. How a nurse perceives fair treatment and recognition of a job well done can either help create positive feelings or perpetuate negative feelings of lowered self-worth. Taking away stressors will only do so much. Reducing burnout rate requires the engagement of all staff and multifocal efforts to prevent it. Nurse burnout can have adverse effects on quality of care and the financial health of the institution when turnover rates rise.

Galletta, Portoghese, D'Aloja, Mereu, Contu, Coppola, & ... Campagna, (2016) found high work demands affected team communication, team efficacy and increased rates of healthcare-associated infections (HAI) as staff developed emotional exhaustion and cynicism. Moreover, perceived team efficacy was associated with patient infection rates

directly and negatively. Teams that lacked synergy, collaboration, and efficient communication, demonstrate poor patient care and increased HAI rates (Galletta et al., 2016). The overwhelmed and understaffed MSU nursing team struggles to execute efficient inter-unit transfer times (Amato-Vealey, Fountain, & Coppola, 2012; Tucker et al., 2008).

Inability to take reports due to an overworked staff requires supporting the fellow nurse as well as the charge nurse. Although the charge nurse is traditionally responsible for supporting staff nurses, the charge nurse within MSU requires support from the staff nurses. As mentioned before, the charge nurse in MSU takes a caseload of patients varying from three to five patients in addition to charge nurse duties. The charge nurse's increased responsibilities and experience has been found to change perceptions of teamwork and safety. One study found that charge nurses with one to five or more than five years of experience were less positive about teamwork and overall perceptions of safety (Wilson, Redman, Talsma, & Aebersold, 2012). Charge nurses are pillars of leadership and standards. Overworking charge nurses can allow such negative perceptions to fester and spread throughout the unit. Providing support for the charge nurses may prevent such negative perceptions of teamwork and safety. Supporting the charge nurse is just as important as supporting fellow staff nurses due to the interdependence of the all the roles within a unit.

Rationale

Kotter's 8-step Change Model helped guide the project (Calegari, Sibley, & Turner, 2015; Finkelman, 2015). Foremost, the Kotter's change model involves stakeholders within the microsystem. The inclusion helps develop buy-in. As referred in Appendix A, the first step is creating a sense of urgency. In this step, informing staff of project

initiatives to gather data and uncover barriers to improvement. The education demonstrates the need for a change. The second step encompasses building a coalition. At this step, informal meetings and discussions are held to share ideas and plans as well as to recruit interest from all staff members. These invested staff members can become the microsystem's change agents that help focus the goal and team toward the change. The third step includes forming a strategic vision and initiative. At this point, a simple vision or purpose is identified and repeated. The repetition ensures all staff members understand its value. It must be attainable and purposeful to maintain staff engagement. Steps four through eight are further described in Appendix A.

Specific project aim

This project aims to improve inter-unit patient transfer times between PACU and MSU via utilizing the courtesy call to help reduce nurse related delays by 10%, increasing understanding and teamwork, promote proactive thinking to manage workflow efficiently, improve patient flow and improve the inter-unit relationship between MSU and PACU.

Section III. Methods

Context

The Medical-Surgical unit (MSU) is part of a VA facility and has 15 rooms with a capacity for 24 beds. Currently, the facility is expanding and remodeling several units including the fourth floor to reflect a nurse and patient-friendly design. Because MSU is divided between the third and fourth floor, the construction creates additional strain for the staff and management, as they frequently need to move rooms, beds, and patients. The unit culture can be described as cooperative with voiced concerns about high workload,

poor staffing, low morale, and high stress. The combination of the unit geography and the culture reflects a burnt-out team.

Although the staff satisfaction scores from 2016 and 2017 demonstrate a positive change already taking hold, room for improvement is recommended. The 2016 surveys scored the lowest scores regarding exhaustion and place of work when compared to other units in the facility. Nursing staff exhaustion rate was 5.5/6 in 2016 and 3.69/6 in 2017. In 2016, 25% reported MSU as a good place to work and this increased in the 2017 survey to 58.06 %. Throughout most of the categories, the MSU staff reported poorly in comparison to other units. MSU staff reported the lowest overall satisfaction scores of 2.38/5 in 2016 but increased to 3.45/5 in 2017. The turnover intention rate was highest at 4.0/5 in 2016 but turnover decreased to 3.08/5 in 2017. Burnout composite scores decreased from 4.33/5 (2016) to 2.90/5 (2017). The overall data helps illustrate MSU's history of an overly burdened unit with high turnover and burnout rates. The data also helps illustrate a positive change occurring throughout the unit. The current nurse manager accepted his position in late 2016 and the leadership direction scores have increased from 2.94/5 to 3.52/5 and praise scores from 2.50/5 to 3.03/5 by 2017.

Appendix B lists the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. Strengths include the engagement MSU and PACU staff, managerial support, and the data demonstrates a need for change. Weaknesses include MSU staff still too busy to take reports at times, MSU charge RN too busy to make 1-2pm calls, and limited literature review about inter-unit transfer process and inter-unit relationships and dynamics. This project demonstrates a few opportunities to reduce RN overtime and save money, potential to improve MSU & PACU relationship, and improve quality care. Threats include but are not limited to resistors to change, RN's focusing only on negative

effects and failing to recognize positive changes, and the project's ability to instill lasting change.

Appendix C illustrates the Gantt chart for the project timeline that follows along Kotter's 8-Step Change Model. Steps 1 and 2, Urgency and Coalition, lasted from August 2017- September 2017 during which the microsystem assessment was completed, data collection began, and initiating of staff engagement. September 2017- December 2017 involved steps 3 and 4, Vision and Enlist, and included developing and sharing the vision to improve inter-unit report and transfer time between PACU and MSU. As well as enlisting key stakeholders such as managers, charge nurses, and nursing staff. Steps 5 and 6 involved addressing barriers and celebrating short-term wins. For example, sharing data findings about the courtesy calls and supporting staff. Steps 7 and 8 of sustain and institute involved recognizing staff for their implementation efforts during March 2018, and sharing findings with staff.

The business case (Appendix D) involves advocating for more staffing as findings demonstrate report delays often attributed to a busy MSU nursing staff. MSU staff's inability to take reports in an efficient manner forces PACU nurses to stay longer, costing the facility to pay PACU staff overtime. The cost of two PACU and MSU nurses on overtime for 1.5 hours equates to more than the cost of a new part-time MSU staff nurse's annual salary. Two PACU nurses must be on the unit at all times per policy for patient safety. The 1.5 hours of average hours was used in relation to Cho Lee, Kim, Kim, Lee, Park, & Sung (2016) findings of an average overtime hours exceeded 1.3 hours of schedules time and three-fourths of nurses reporting working 1.8 hours of overtime. 1.5 hours is conservative considering it does not account for the unreported overtimes hours and voluntary hours. Referring to Appendix D, the overall potential cost saving is \$22,325.00 when one

subtracts the total cost of PACU and MSU nurse overtime cost from the annual salary of a new part-time MSU nurse. The additional part-time nurse can help MSU navigate the transfer process via the role of an admission and discharge nurse (Shimp, & Neville, 2017). Limitations of the budget include not accounting for inflation, the cost of keeping PACU open for the additional 1.5 hours, and the cost of benefits for an additional part-time nurse on MSU.

Drebit, Ngan, Hay, & Alamgir (2010) found that nurses working overtime not only cost the facility financial resources in terms of employee pay but also in patient safety. Nurses working over 12 hours/day or over 40 hours/week increased the risk for injuries to both staff and patient, and increased burnout for staff leading to high turnover and subsequently, aggravating the nursing shortage. Several other studies have reported that nurses are fatigued from over-time and their patient care is compromised (Drebit, Ngan, Hay, & Alamgir, 2010). Furthermore, the cost of onboarding a new nurse can cost between 0.75 to 2.0 times the salary of a departing nurse (Jones & Gats, 2017).

Unfortunately, MSU has a high turnover rate that may be costing the facility more money to onboard a few nurses every year than onboarding additional staff to help support and prevent the existing staff from leaving. Advocating for additional MSU staff may improve nurse-patient ratios, retention, efficiency, and reduce workload burdens and costs.

Intervention

Increasing awareness and reducing transfer times are important for maintaining patient flow. Project interventions include the following: (1) MSU staff education about data demonstrating various delays; 2) initiate an 8 am and 1-2 pm call times between the two units by the charge nurse; 3) continue the courtesy calls in PACU and; 4) encourage

nurses to continue supporting team members. The change in practice is to improve communication and patient flow between the units via phone scheduled phone calls.

One interesting development that presented itself when analyzing the collected data includes the "courtesy calls." Initially, the collecting of the data included whether or not the staff from PACU utilized a courtesy call to provide MSU with a proactive warning about patient transfers. The PACU staff was not directed in any way to perform the courtesy calls during the pre-implementation stage, yet courtesy call utilization enabled MSU to take the report within 16.57 minutes on average. Whenever the PACU did not provide a courtesy call, the average time increased to 54.5 minutes for MSU to take report. The results of such an intervention encourage its continuation.

Study of the Intervention

Outcome measures will include pre- and- post-implementation of System Thinking Scale (STS) likert surveys focused on the staff's ability demonstrate system thinking and the need for collaboration and support, found in Appendix E. Data collection between MSU-PACU phone logs and patient transfer delays collection continued during and post interventions. Random audit days help evaluate all other implementations.

Measures

The STS utilization will help assess the MSU and PACU staff's collective ability to make the connections and awareness how events and team members play within the bigger picture of the unit. The STS may help assess the change in thinking among the staff members toward a more team work and collaborative attitude. Moreover, the phone logs will help evaluate the times until a report is taken and help document the frequency of nursing related delays. The ability of the charge nurse to perform the 8 am and 1-2 pm phone call was monitored via random audit days.

Section IV. Results

Objectives met include reducing nurse related report delays by 14% with a decrease from 54% to 40%. The ability of MSU to take report, without delays, improved from 10 % to 33% (Appendix F, Appendix G). The courtesy call continued to demonstrate its value by allowing MSU to take a report within 16.33 minutes on average during the implementation stage (Appendix H).

The System Thinking Scale pre and post- implementation scores are found in Appendixes I, J, and K. The STS findings demonstrated an overall increase in system thinking throughout the nursing staff. The randomized audit days for the charge nurse inter-unit phone call demonstrated a lack of ability to perform the intervention due to time constraints and forgetfulness. As demonstrated in the SWOT analysis, the charge nurse was too preoccupied with patient caseload and charge nurse responsibilities to perform the 8 am and 1-2 pm inter-unit phone call intervention.

Section V. Discussion

Summary

The process of inter-unit patient transfer involves multiple moving parts that demand collaboration of various participants from both units. Communication between the units is vital for efficient transfers. The projects key findings include the effectiveness of the courtesy call and the nursing staff's ability to demonstrate system thinking and teamwork mentality. The rationale for using Kotter's 8- step method allowed the project to progress over a longer period of time and specific goals at each step. Moreover, the 8-steps allowed for a more removed approach in which the buy-in from staff encouraged the staff to carry the project and implementations with minimal direct supervision. To maintain momentum, random audit days helped reinforce the project vision whenever the vision faltered. One important lesson learned

from this method is allowing the resistors to voice their concerns to allow for open and constructive discussion to naturally occur. The resistors feel heard and valued after voicing their frustrations with any problems and lack of solutions. This also helps establish rapport and buy-in from the resistors as well. Another valuable lesson is including the staff in the data collection. This helps the staff actively participate, take responsibility of problem and possible solutions, and helps prevent doubt in the data as they themselves have collected. Including the MSU and PACU staff members in the project findings and sharing the data along with the system thinking approach to the problem appears to have encouraged staff to adopt system thinking. Providing the staff with the problem to critically think about how every step and individual is connected to one another and to patient transfers could have potential in other projects as well.

Conclusions

Implications of this project include the usefulness of the courtesy call throughout all units to help communication stay clear and provide units to plan accordingly. The utilization of the courtesy call has dwindled during post implementation as the time until report is taken averaged to 19 minutes. This illustrates that although the courtesy call helps patient flow, the process of inter-unit patient transfers still has room for improvement. The inability to successfully implement the 8 am and 1-2 pm phone calls between the units could be attributed to the lack of a reminder for the charge nurse to practice the task. A visual reminder (i.e. checklist) placed near the nursing station's phone could have helped. MSU might financially benefit from including an additional part-time nurse with a designated role of an admission/ discharge to help the unit navigate the transferring process. More literature about the relationships and processes of inpatient inter-unit patient transfers is needed to better develop methods for improvements rather than the focusing on barriers.

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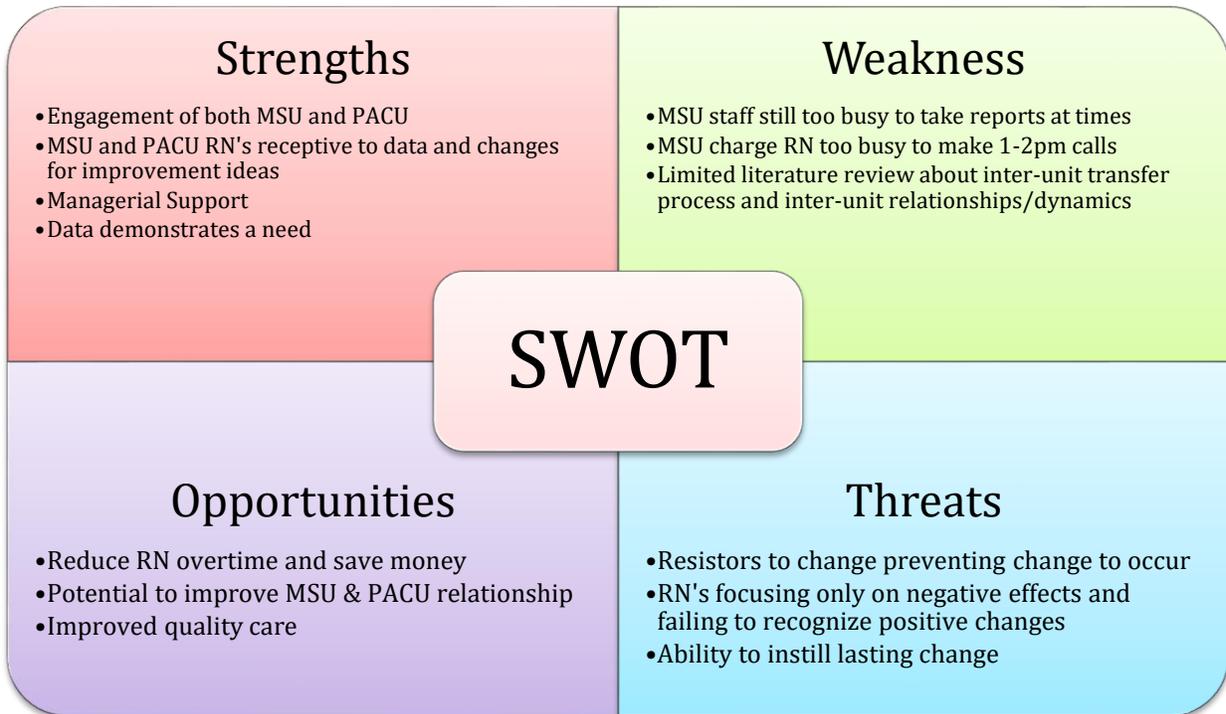
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Appendix A

Kotter's 8- Step Change Model	
Steps	Actions
1. Create a Sense of Urgency	<ul style="list-style-type: none"> • Inform/educate staff of project initiatives to gather data and uncover barriers for improvement.
2. Building Coalition	<ul style="list-style-type: none"> • Informal meetings and discussions encouraging staff of both MSU and PACU to share feelings, ideas for improvement, and unique prospective of the inter-unit report delays.- Fostering buy-in • Including the support staff as well as the nurses (i.e. housekeeping & MSU secretaries) into the discussion • Place value on teamwork, encourage & demonstrate understanding
3. Form Visions and Initiatives	<ul style="list-style-type: none"> • Vision: Improve inter-unit report and transfer time between PACU and MSU by identifying and mitigating barriers. • Vision or goal is identified and repeated; attainable and purposeful in order to maintain staff engagement • Repeated at informal meetings/ check-ins with all staff members.
4. Enlist Volunteer Army	<ul style="list-style-type: none"> • Develop professional relationship and active recruitment of MSU nurse manager and secretaries, nurse manager and nurses from PACU • Encourage staff members to share feelings and coping strategies with others to air out grievances about problem. • Allow resisters to change voice concerns; demonstrate understanding and encouragement for participation.
5. Enable Action by Removing Barriers	<ul style="list-style-type: none"> • Encourage staff members to actively seek out help for self and others when possible. • Update staff of findings and developments at check-ins • Providing support when staff voice frustrations about slow change
6. Generate Short-Term Wins	<ul style="list-style-type: none"> • Encourage staff to celebrate simple accomplishments; courtesy calls demonstrated a positive change via PACU and MSU nurses and support staff.
7. Sustain Acceleration	<ul style="list-style-type: none"> • Providing recognition for hard work • Continued communication • Remind staff of value of continuous efforts and to continue to participate
8. Institute Change	<ul style="list-style-type: none"> • Present findings to MSU nurse manager • Encourage the continuation of the courtesy calls • Inform MSU and PACU staff about findings; provide support- data findings help validate employee concerns about problem and the need for more staffing • Initiate the change for 1-2pm inter-unit charge nurse calls • Encourage staff to continue to support each other as team members • Evaluating the success of the change and/ or the need to adjust the change
As cited in (Calegari, Sibley, & Turner, 2015) (Finkelman, 2015).	

Appendix B



Appendix C
Gantt Chart: Action Plan

Month	08/2017	09/2017	10/2017	11/2017	12/2017	01/2018	02/2018	03/2018	04/2018
<p>Step 1: Urgency</p> <ul style="list-style-type: none"> • Microsystem assessment and data collection: poor staff satisfaction scores, high turnover rates, understaffing • Inform/educate staff of project initiatives to gather data and uncover barriers for improvement. 									
<p>Step 2: Coalition</p> <ul style="list-style-type: none"> • Meetings/ encourage discussions- demonstrate understanding • Including the support staff as well as the nurses (i.e. housekeeping & MSU secretaries) into the discussions 									
<p>Step 3: Vision</p> <ul style="list-style-type: none"> • Vision: Improve inter-unit report and transfer time between PACU and MSU by identifying and mitigating barriers. • Repeated at informal meetings/ check-ins with all staff members 									
<p>Step 4: Enlist/Empower</p> <ul style="list-style-type: none"> • Recruit key stakeholders: Develop professional relationship and active recruitment of MSU nurse manager and secretaries, nurse manager and nurses from PACU • Allow resisters to change voice concerns; demonstrate understanding and encouragement for participation. 									
<p>Step 5: Address Barriers</p> <ul style="list-style-type: none"> • Encourage staff members to actively seek out help for self and others when possible. • Update staff of findings and developments at check-ins • Providing support when staff voice frustrations about slow change 									
<p>Step 6: Short-term wins</p> <ul style="list-style-type: none"> • Encourage staff to celebrate simple accomplishments; courtesy calls demonstrated a positive change via PACU and MSU nurses and support staff during huddles 									
<p>Step 7: Sustain</p> <ul style="list-style-type: none"> • Providing recognition for hard work • Continued communication • Remind staff of value of continuous efforts and to continue to participate 									
<p>Step 8: Institute</p> <ul style="list-style-type: none"> • Present findings to MSU nurse manager • Encourage the continuation of the courtesy calls; Initiate the change for 1-2pm inter-unit charge nurse calls • Inform MSU and PACU staff about findings; provide support- data findings help validate employee concerns about problem and the need for more staffing • Encourage staff to continue to support each other as team members • Evaluating the success of the change and/ or the need to adjust the change 									

Appendix D
Budget

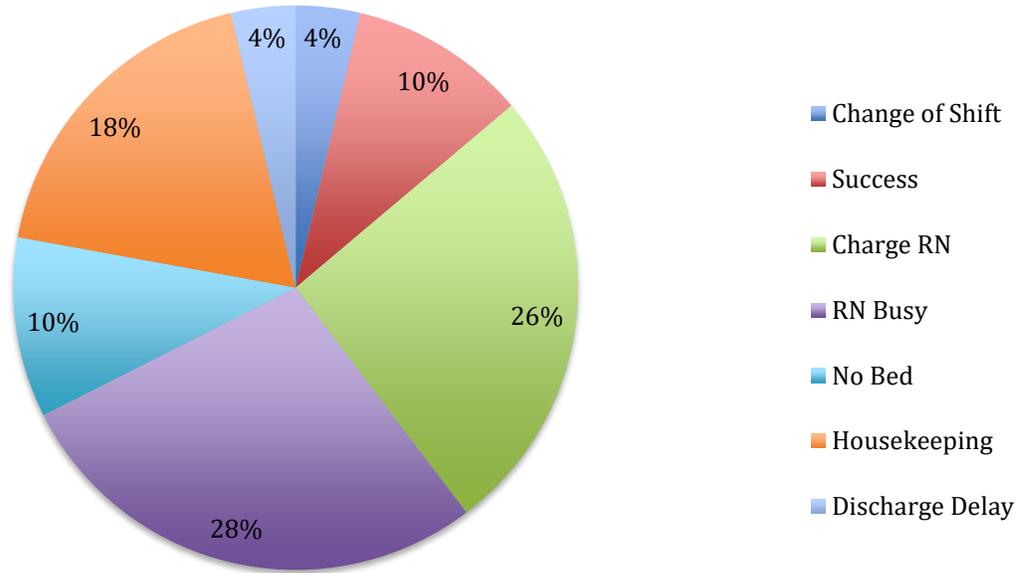
	PACU/MSU Average Annual Salary		PACU Overtime/ Year	MSU Overtime/ year
Hourly Rate	\$50	Hourly Rate (x 1.5 of scheduled rate)	\$75	\$75
Number of RN's	1	Number of RN's	2	2
Hours/ 0.8 FTE	1664	Average OT Days/ year	104	365
		Hours of Overtime	1.5	1.5
Total Annual Salary	\$83,200.00	Overtime Totals	\$23,400.00	\$82,125.00
		Total		\$105,525.00
Cost- Saving				\$105,525.00- \$83,200.00 = \$22,325.00

Appendix E
System Thinking Scale (STS)

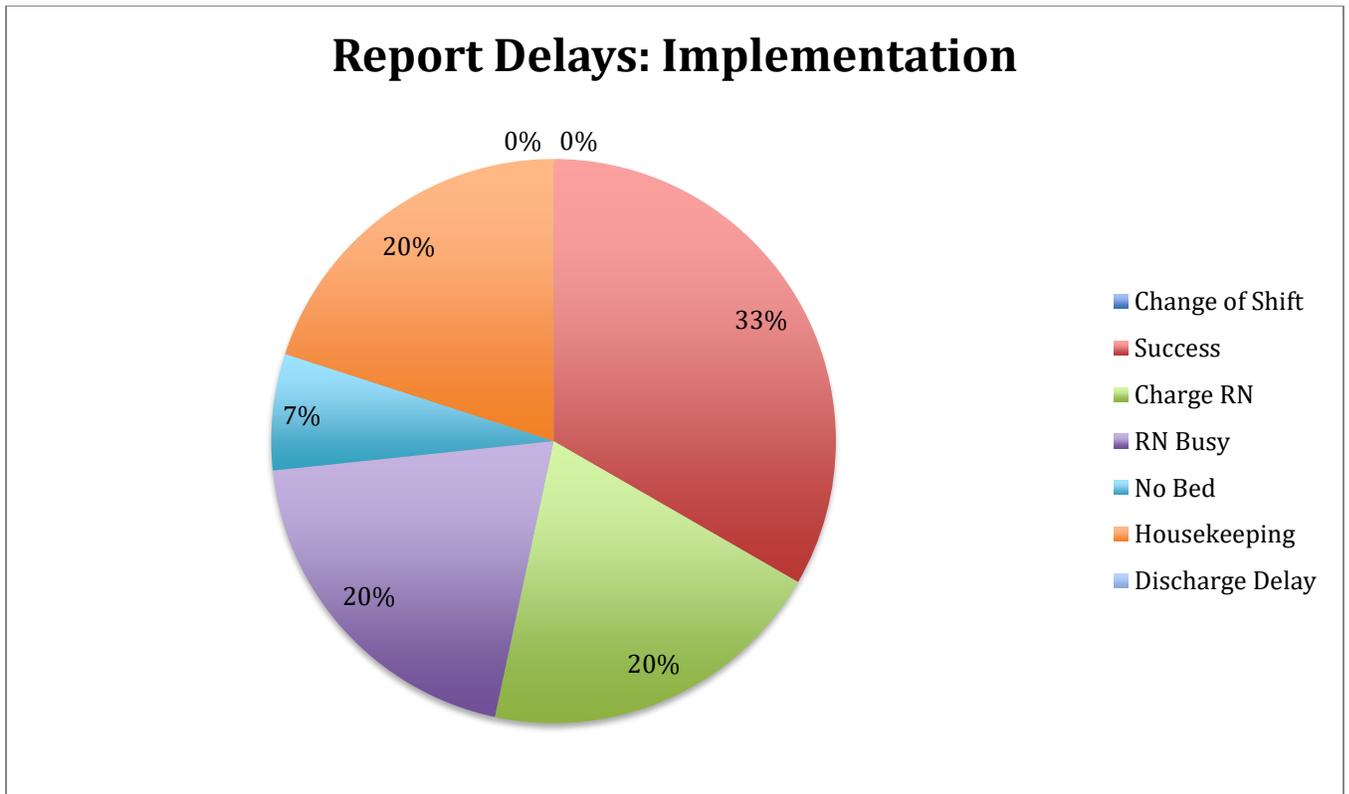
Role _____ Unit _____ Years of Experience _____ Highest Level of Education _____ Date _____					
When I want to make an improvement. . .	Never	Seldom	Some of the time	Often	Most of the time
1. I seek everyone’s view of the situation.					
2. I look beyond a specific event to determine the cause of the problem.					
3. I think understanding how the chain of events occur is crucial.					
4. I include people in my work unit to find a solution.					
5. I think recurring patterns are more important than any one specific event.					
6. I think of the problem at hand as a series of connected issues.					
7. I consider the cause and effect that is occurring in a situation.					
8. I consider the relationships among co- workers in the work unit.					
9. I think that systems are constantly changing.					
10. I propose solutions that affect the work environment, not specific individuals.					
11. I keep in mind that proposed changes can affect the whole system.					
12. I think more than one or two people are needed to have success.					
13. I keep the mission and purpose of the organization in mind.					
14. I think small changes can produce important results.					
15. I consider how multiple changes affect each other.					
16. I think about how different employees might be affected by the improvement.					
17. I try strategies that do not rely on people’s memory.					
18. I recognize system problems are influenced by past events.					
19. I consider the past history and culture of the work unit.					
20. I consider that the same action can have different effects over time, depending on the state of the system.					

Appendix F

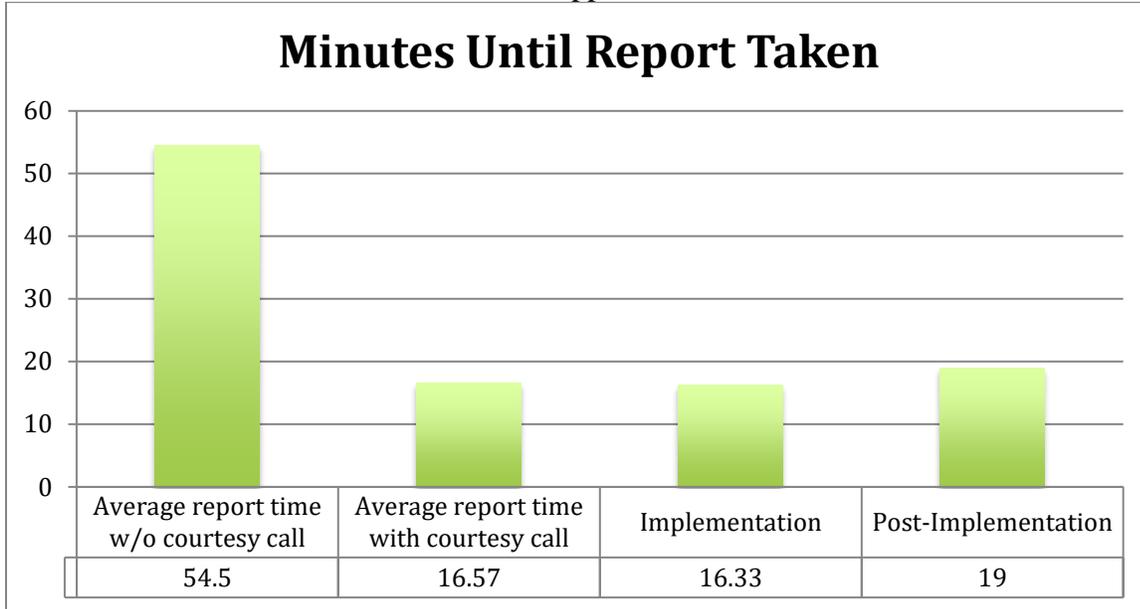
Report Delays: Pre- Implementation



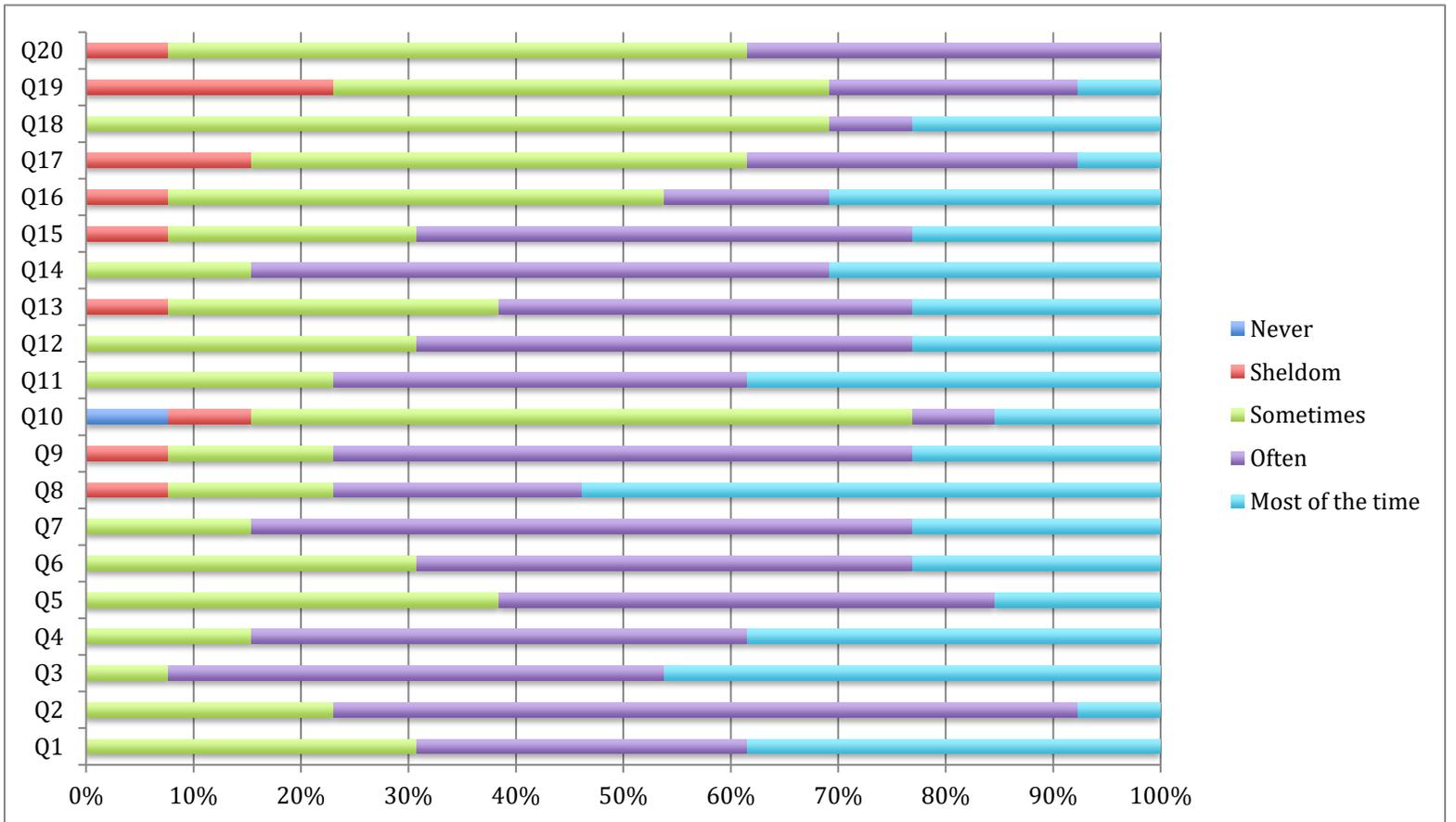
Appendix G



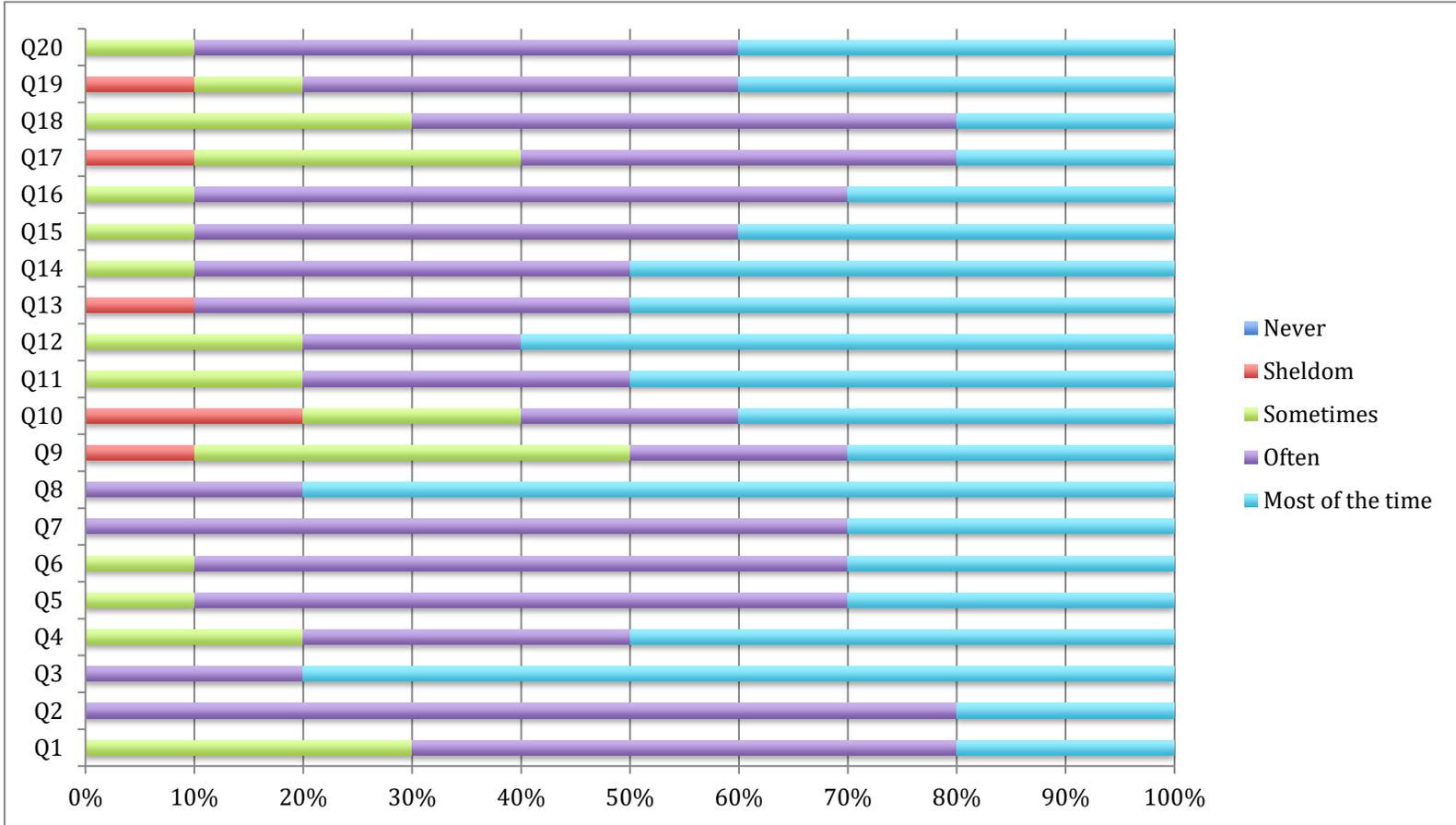
Appendix H



Appendix I
Pre-Implementation System Thinking Scale (STS)

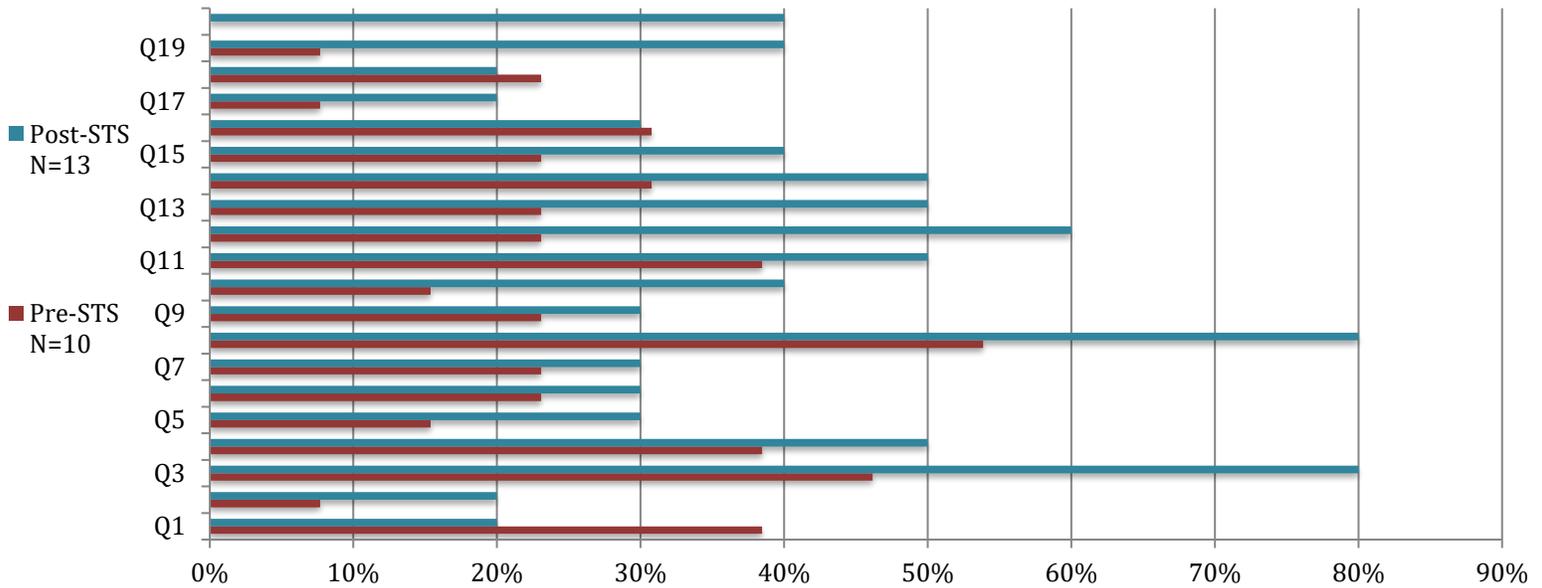


Appendix J
Post- Implementation STS



Appendix K

"Most of the Time" Responses in System Thinking Scale



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Post-STS N=13	20%	20%	80%	50%	30%	30%	30%	80%	30%	40%	50%	60%	50%	50%	40%	30%	20%	20%	40%	40%
Pre-STS N=10	38%	8%	46%	38%	15%	23%	23%	54%	23%	15%	38%	23%	23%	31%	23%	31%	8%	23%	8%	0%

Appendix L
Statement of Determination

Title of Project: Inter-unit Patient Transfer Times

Collected data between medical-surgical unit (MSU) and post-anesthesia care unit (PACU) demonstrate charge nurse related delays (26%) and staff nurse delays (28%) (Marinov, 2017). Together 54% of the report delays recorded suggest a need for change among the nursing staff of MSU. The aim of this project is to improve inter-unit patient transfer times between PACU and MSU by educating the MSU staff about the identified delays and initiating an 8 am & 1-2 pm inter-unit calls. Increasing awareness and reducing transfer times are important for maintaining patient flow and reducing resource utilization. Project interventions include the following: (1) MSU staff education about findings; (2) initiate an 8 am and 1-2 pm call times between the two units by the charge nurse (3) utilizing the courtesy call and; (4) encourage staff to continue supporting each other. The change in practice is to improve communication and patient flow between the units via phone scheduled phone calls. Finally, outcome measures will include pre- and- post-implementation Likert surveys focused on the inter-unit collaboration and support. Data collection between MSU-PACU phone logs will continue through intervention and post-intervention to assess the frequency to similar comments and time delays of patient transfers.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used:

<http://answers.hhs.gov/ohrp/categories/1569>

This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

Appendix M
IRB Non-research determination form

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title: The Integrative Health Approach (IHA) Re-educational Program	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care . ALL participants will receive standard of care.	X	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: <i>“This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”</i>	X	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.