Data Analysis and Quality Improvement Initiative Proposal

Learner's Name

Capella University

Quality Improvement for Interprofessional Care

Data Analysis and Quality Improvement Initiative Proposal

July, 2017

Comment [JS1]: Good job with the submission. It follows the rubric. Fo the most part is written in scholarly voice. The submission is clear and concise. References and citations are used to support your opinion and position with relevant evidence. Please see my tracked changes for areas of revision.

Data Analysis and Quality Improvement Initiative Proposal

I. Introduction

Health care professionals are constantly striving to improve the quality of care and safety provided to their patients. The culture of care quality and patient safety depends on a strong and supportive work environment that promotes leadership, evidence-based practice, effective communication, and interprofessionalism. Nurse leaders play a crucial role in establishing this culture and directly influence quality outcomes across an organization.

II. Problems and Needs

The role of nurse leaders in maintaining the quality in the nursing and clinical departments is discussed using the example of TrueWill General Hospital (TGH), a multispecialty hospital in the United States. Recently, the hospital's quality management office, as part of its annual assessment of organizational quality, completed its analysis of dashboard metrics for the surgical units for the year 2015–2016. The office released the data in its Quality and Safety Report 2015–2016. The surgical units' data included adverse events and near misses and used four quality indicators: length of stay (LOS) exceeding 7 days, patient readmission rates, pain level between 7 and 10 for more than 24 hours, and patients with pressure ulcers.

III. Proposed Solution

The results of the analysis showed that three quality indicators—pain levels, readmission rates, and pressure ulcers—performed below the hospital's benchmarks (see Table 1 and Appendix for data and descriptions of indicators and benchmarks). The connection between these indicators and the services of the surgical units' nurses will be discussed in this proposal for a quality improvement initiative. The proposal will analyze the relational patterns between the

indicators and the data, identify assumptions governing health care quality and nursing characteristics, determine methods to discover the root causes of quality issues, and recommend a framework as well as strategies to improve quality outcomes in the surgical units.

Analysis of Dashboard Metrics to Identify Quality Issues

The patients who require round-the-clock perioperative care are admitted to TGH's surgical units, which are equipped for general, orthopedic, urology, as well as ambulatory surgery. The critical nature of patients admitted to these units' makes quality and safety the units' highest goals. Quality and safety outcomes are regularly evaluated in these units. The units are staffed by teams of interdisciplinary professionals—physicians, nurses, therapists, dieticians, pharmacists, and ancillary medical staff.

Table 1

Quality and Safety Report 2015–2016

Unit – Year	LOS exceeding 7 days	Patient readmission	Pain level between 7 and 10 for more than 24 hours	Patients with pressure ulcers	Total
Surgical 2015	43	29	15	14	101
Surgical 2016	31	43	30	25	129

The data available from the Quality and Safety Report in Table 1 revealed that the annual patient readmission rates increased from 29 incidents in 2015 to 43 in 2016. Similarly, the number of patients who experienced pain for more than 24 hours without relief doubled from 15 in 2015 to 30 in 2016. Pressure ulcers, a common quality and safety issue in surgical patients, also increased to 25 from 14 in 2015. Conversely, the units reported a drop in the number of patients whose LOS exceeded 7 days—from 43 in 2015 to 31 in 2016.

The outcomes are a cause for concern because they can affect the hospital's stakeholders—the patients, health care professionals, and the organization—in various ways. Patient readmissions are a costly outcome for TGH because the Patient Protection and Affordable Care Act, through its Hospitals Readmissions Reductions Program, financially penalizes hospitals with higher than expected readmissions (Bartel, Chan, & Kim, 2014). Hefty penalties are enforced because readmissions are thought to be the result of poor follow-up care (Abelson, 2013).

Furthermore, studies have found an association between LOS and the risk of readmissions. Bartel et al. (2014) reviewed prior literature on the impact of decreasing patient LOS and increasing readmission rates and came to the conclusion that a patient who stays for an additional day may reach a higher level of stability. At TGH, health care professionals may have faced immense pressure to reduce patient LOS to control per capita health costs. The pressure could have forced the units' nurses and doctors to rush through patient care plans and hasten the process of educating patients regarding post-discharge behavior. Furthermore, patients who are readmitted may lose trust in the ability of their health care providers to provide complete and quality care.

Just as readmissions are a quality issue that affects all stakeholders, high pain levels and pressure ulcers affect the surgical units' nurses and patients. This inference is based on the theory of nurse-sensitive patient outcomes, which explains that pain and pressure ulcers are patient outcomes that depend on the quantity and quality of nursing (Stalpers, de Brouwer, Kaljouw, & Schuurmans, 2015). Based on this inference, it can be assumed that there could be issues in the performance and quality of nursing in TGH's surgical units.

Moreover, there is evidence linking pressure ulcers and postoperative pain to a higher risk of readmissions (Kirkner, 2017; Lyder et al., 2012). While TGH's data do not directly link pressure ulcers and pain to readmission rates, it is possible to theorize that reducing pressure ulcers and pain in patients will also reduce readmissions. Therefore, the surgical units' nurses can help prevent readmissions by preventing ulcers and managing pain in patients more efficiently.

Comment [JS2]: This reference is almost too old to be viable for relevai evidence based practice. In health care, it is important to use up to date references that are not more than 5 years old. I might suggest finding a more recent reference.

The standard of nursing quality is an important predictor of favorable quality outcomes. Based on the analysis of the data in the report, TGH's nurse leaders met with the units' nurses to decipher the nursing factors that contributed to the unfavorable outcomes. The nurse leaders identified the problem to be the transactional leadership style practiced by the perioperative charge nurses. Transactional leadership is defined as an exchange relationship that clearly denotes the follower from the leader and is focused on the contingent reward system with individuals being rewarded or punished based on their performance (Thomas, 2016). Transactional leadership may have become the dominant style of leadership in TGH's surgical units because of the lack of training and incompetence among nurses. The nurse leaders decided to change the leadership style of charge nurses with a quality improvement (QI) initiative based on the data analysis. The proposal for the QI initiative will identify an ideal leadership style and propose strategies to implement the style. Knowledge gaps or areas of uncertainty that require further evaluation will also be discussed in the proposal.

Outline for the Quality Improvement Initiative Proposal

Charge nurses occupy a front-line position in influencing the staff engaged in patient care (Thomas, 2016). They are responsible for functions such as coordinating and evaluating nurse staffing plans, balancing unit budgets, and making patient assignments. However, the transactional leadership at TGH was ineffective because the charge nurses were not skilled

enough to notice nurse dissatisfaction, prevent conflicts and competition between the nurses, and establish effective communication channels. The surgical units' nurses were not given any guidance by the charge nurses on accomplishing quality improvement tasks or participating in collaborative and interprofessional efforts. Because of the transactional leadership's tendency to reward or punish staff based on performance (Thomas, 2016), the nursing staff paid more attention to accomplishing tasks such as discharging patients quickly than ensuring patient satisfaction.

The QI initiative will provide strategies that support the transition from transactional to transformational leadership. Transformational leaders focus on internalizing ethical and professional values in their team members and assist in aligning those values with organizational goals. A transformational leader's optimism, selfless service, and creativity motivate and encourage teams. It is worth noting that the motivational and inspirational aspects of transformational leadership will significantly change the work environment and the nurses' commitment to the organization (Thomas, 2016).

The quality improvement model that is best suited to introduce and implement transformational leadership is the plan-do-study-act (PDSA) model. Hence, the model will serve as the framework for the QI initiative. The model is effective when there is a need for accelerated change, as in TGH's case. The four steps of the framework can affect system change that will promote long-term improvement and implementation of the initiative on a larger scale. Various strategies incorporated into the PDSA steps will be discussed briefly (Thomas, 2016).

1. Plan: This step involves setting up an interdisciplinary team. While the nurse leaders already identified the problem to be transactional leadership through discussions and the analysis, the interprofessional team will validate the previous

results using a Multifactor Leadership Questionnaire survey. The survey will be distributed to the nurses as well as other perioperative health care professionals. After the results of the survey are analyzed, the team will define achievable goals such as establishing a transformational leadership style and improving the affected quality indicators.

2. Do: In this step, the team, with support from the organization, will create a strategic plan to achieve the defined goals. Examples of strategies include introducing training modules for leadership development and quality and safety education.
3. Study: The results from the implementation of strategies devised in the previous steps are analyzed. Observations are based on different interprofessional perspectives and are set against the performances of TGH's surgical units, not just nursing.
4. Act: In the final step of the PDSA model, the goals set in step one are reevaluated to determine whether the strategies were effective. TGH can carry out the step by calculating data on the four quality indicators and noting increases or decreases in the quality outcomes. Based on that evaluation, the PDSA cycle is deemed complete or renewed with new goals and strategies.

Despite the effectiveness of the PDSA model, knowledge gaps and areas of uncertainty may still affect the QI process. First, the use of just four indicators to measure quality outcomes in the surgical units can give a partial or narrow understanding of the issues. Further evaluation should be done using indicators such as mortality and patient satisfaction and nurse-sensitive indicators such as nurse perception of job and level of nursing education.

Secondly, the data only shows problems affecting the hospital's surgical units. Foundational theories such as systems theory explain how problems in one part of the organization affect performance and quality outcomes in other parts. However, there is a lack of data on quality issues from other departments at TGH that could be connected to the issues seen in the surgical unit. Therefore, the team spearheading the QI efforts can take steps to include data from other units and departments to create a comprehensive QI initiative. Another area of uncertainty is the studies connecting nursing leadership and patient outcomes. Most studies do not test whether nursing leadership directly improves patient outcomes; they merely analyze the connection conceptually. Understanding the relationship between leaders and patient outcomes requires interventions and longitudinal studies with continuous observations (Wong, 2015).

To achieve better patient outcomes by changing the nursing leadership, the proposed QI initiative will be guided by various interprofessional perspectives. The perspectives will support patient safety, cost-effectiveness, and work–life quality for nurses and other units' staff. Each perspective will address an aspect relevant to TGH, such as leadership and teamwork. The discussion will also identify assumptions that highlight the importance of these perspectives.

Integration of Interprofessional Perspectives That Support Quality Improvement

Over the years, efforts to improve health care quality and safety drew inspiration from various interprofessional perspectives. The perspectives important to TGH are leadership theory, systems theory, and collaborative relationships. The identification of these specific perspectives and their integration into the hospital's QI initiative are based on assumptions made on the factors that influence patient outcomes.

One assumption is that health care systems are interconnected and problems in one unit or department can affect other parts of the system (Huber, 2017); problems in the surgical units

can affect the quality of other hospital departments. When quality is compromised in multiple departments, the organization will not be able to function properly and achieve its goals of providing quality and safe care for patients. Poor nursing performance and quality also affect the performance of doctors, therapists, pharmacists, dieticians, and other interdisciplinary professionals working in the surgical unit. These health care professionals work alongside nurses and depend on them to carry out care plans effectively, quickly, and cost-effectively.

Another assumption is that nurse leaders such as charge nurses can learn and develop leadership attributes (Thomas, 2016) that will help them improve their leadership style. However, leadership development can only take place if the organization is supportive and allocates appropriate resources and facilities. The third and last assumption guiding the conceptual basis of the initiative is that anyone and not just executives or managers can practice leadership (Smith-Trudeau, 2016).

The main theme explored in these assumptions is leadership; it is an important systems theory factor and collaborative relationships are influenced by leadership styles. Although the connection between leadership and patient safety needs to be further evaluated, experts agree that certain leadership styles obtain better results than others do. In particular, experts have compared the effectiveness of transactional leadership against transformational leadership in achieving patient safety. Transactional leadership, as was observed in TGH, is not effective as it focuses on rewards rather than outcomes. Transformational leadership, on the other hand, possesses a higher level of competence that helps in guiding and motivating team members to follow a higher level of ethics and evidence-based care, thereby improving the outcomes for patients (Thomas, 2016). Transformational leaders are also more competent when introducing cost-reduction plans while

maintaining quality in their units. They are more skilled at organizational and administrative management, which is an essential skill for planning budgets, than transactional leaders.

Transformational leadership is also the preferred leadership strategy in implementing systems theory approaches. Systems theory is important in QI as it helps understand the root causes and symptoms of quality and performance problems (Huber, 2017). By understanding latent causes of quality issues, TGH can focus on proactive quality measures that prevent quality and safety issues in the long term. Such approaches are known to be cost-effective and sustainable.

Transformational leadership's focus on people through effective interpersonal relationships and charismatic influence are also beneficial for establishing collaborations among teams and developing optimum work–life quality for staff. The surgical units at TGH, consisting of interprofessional staff, depend on staff having a sense of shared goals. The nurses are the largest staff group in the surgical units and issues within their workforce such as nonalignment of goals affect other units' staff. Transformational leaders are capable of guiding nurses in building respectful and positive relationships with their colleagues.

These interprofessional perspectives will act as guides for the QI team when they implement the PDSA steps. The perspectives are especially useful in facilitating open and transparent communication. The QI proposal will suggest communication strategies that are imperative when expanding the proposal into a full-fledged QI program. The proposal will also provide assumptions that will guide those suggestions.

Effective Communication Strategies to Promote Quality Improvement

Communication is a key leadership duty and facilitates the smooth functioning of different organizational systems (Huber, 2017). Without effective communication methods,

leaders will not be able to convey organizational goals and decisions or implement QI changes. At TGH, the charge nurses were not able to communicate care plans to their nursing staff or coordinate with other units' leaders and interdisciplinary professionals to achieve ideal outcomes. Their ineffective communication methods also set a bad example for the nursing staff, who look to their leaders for guidance and instruction.

Therefore, it is important to develop communication strategies before the QI strategies are implemented. Well-defined communication channels will promote interprofessional efforts in patient care and quality improvement. The assumptions guiding the strategies are as follows: (a) Leaders facilitate and mediate effective interprofessional collaborations in care delivery, which can only happen if the leaders are competent in communication skills; (b) Quality improvement is a resource-intensive effort, but coordinating and utilizing those resources need open and honest lines of communication between organization, patients, and interprofessional staff; (c) Nursing autonomy in decision-making is important for improving the performance of nursing staff, but autonomy is a product of mutual respect and effective communication between all interprofessional staff, including management and administrative staff.

Based on these assumptions, a few communication strategies will be suggested that the QI team can enforce to implement the QI initiative and promote interprofessional care or teamwork. The strategies are as follows: (a) training the QI team in verbal, nonverbal, written, and electronic means of communication, which will improve relations within the team and will be useful during interprofessional collaborations; (b) setting up team documentation where all team members will enter details of ideas, meeting minutes, and QI-related data; during the *do* stage of the PDSA, team documentation will be implemented at the unit level and all staff present during a patient visit will enter details into the patient record, assist with order entry, and

process prescriptions (Bodenheimer & Sinsky, 2014); (c) setting up a weekly QI team meeting where team members will receive a copy of the agenda in advance and provide feedback on meeting goals; post-meeting, members will be sent copies of all communication via e-mail to maintain transparency (Thomas, 2016); and (d) briefing units' staff on decisions taken in these meetings and, when needed, e-mailing summaries of the meeting minutes to all staff members so that specific groups or individuals will not feel excluded from the QI efforts.

As the QI process progresses, the team can add more communication strategies into the PDSA model or make improvements to the existing strategies. After all, the PDSA model for quality improvement was selected because it allowed experimentation, quick pilot testing of plans, and implementing the plans on a larger scale after analyzing the results (Thomas, 2016). The onus of organizing and coordinating the QI efforts falls on the nurse leaders heading the team. They have to develop their leadership competency to inspire similar changes in the charge nurses.

IV. Conclusion

Data and outcome-driven organizations must constantly analyze their quality indicators and implement changes that improve all clinical and organizational outcomes. Quality and safety evaluations, such as the one conducted at TGH, often reveal hidden issues that are influencing patient outcome negatively such as ineffective leadership styles. Leadership is important in uncovering the latent problems and implementing changes that improve quality and safety. However, as displayed at TGH, leadership itself depends on factors such as interprofessional care and teamwork, communication, and highly-qualified health care professionals. The absence of these factors can affect patient outcomes drastically. Understanding this interdependence between organization, leadership, and staff is key to high-quality performance and patient safety.

References

Abelson, R. (2013, March 29). Hospitals question Medicare rules on readmissions. *The New York Times*. Retrieved from http://nytimes.com/2013/03/30/business/hospitals-question-fairness-of-new-medicare-rules.html

Bartel, A. P., Chan, C. W., & Kim, H. (2014, September). *Should Hospitals Keep Their Patients Longer? The Role of Inpatient and Outpatient Care in Reducing Readmissions* (Report No. 20499). Retrieved from the National Bureau of Economic Research website: http://nber.org/papers/w20499

Bodenheimer, T., & Sinsky, C. (2014). From triple to quadruple aim: Care of the patient requires care of the provider. *Annals of Family Medicine*, *12*(6), 573–576. Retrieved from https://ncbi.nlm.nih.gov/pmc/articles/PMC4226781/

Huber, D. L. (2017). *Leadership and nursing care management* (6th ed.) Philadelphia: W.B. Saunders. http://dx.doi.org/10.7748/nm.21.6.13.s14

Kirkner, R. M., (2017, May 7). Postop pain may be a predictor for readmission. *ACS Surgery News*. Retrieved from http://mdedge.com/acssurgerynews/article/137637/pain/postop-pain-may-be-predictor-readmission

Lyder, C. H., Wang, Y., Metersky, M., Curry, M., Kliman, R., Verzier, N. R., & Hunt, R. H. (2012). Hospital-acquired pressure ulcers: Results from the national Medicare patient safety monitoring system study. *Journal of the American Geriatrics Society*, *60*(9), 1603–1608. Retrieved from http://henlearner.org/wp-content/uploads/2012/03/hospital-acquired-pressure-ulcers.pdf

Smith-Trudeau, P. (2016). Nursing leadership at all levels: The art of self-leadership. *Vermont Nurse Connection*, *19*(4) 4–5. Retrieved from

Comment [JS3]: I would suggest locating a more recent reference.

http://web.a.ebscohost.com.library.capella.edu/ehost/pdfviewer/pdfviewer?vid=1&sid=631c6937-3dbc-466d-ba31-b5e5aec17013%40sessionmgr4010

Stalpers, D., de Brouwer, B. J. M., Kaljouw, M. J., & Schuurmans, M. J. (2015). Associations between characteristics of the nurse work environment and five nurse-sensitive patient outcomes in hospitals: A systematic review of literature. *International Journal of Nursing Studies, 52*(4), 817–835. Retrieved from http://sciencedirect.com.library.capella.edu/science/article/pii/S0020748915000061?_rdoc=1&_fmt=high&_origin=gateway&_docanchor=&md5=b8429449ccfc9c30159a5f9aeaa92ffb&ccp=y

Thomas, C. D. (2016). *Transformational leadership as a means of improving patient care and nursing retention* (Doctoral dissertation). Retrieved from ProQuest. (Order No. 10125747).

Wong, C. A. (2015). Connecting nursing leadership and patient outcomes: State of the science. *Journal of Nursing Management, 23*(3), 275–278. Retrieved from http://onlinelibrary.wiley.com.library.capella.edu/doi/10.1111/jonm.12307/full

Appendix

Description of Quality and Safety Report 2015–2016

The Quality and Safety Report data for the year 2015–2016 represents four recognized quality indicators in health care. The calculations are based on the total number of adverse events and issues, differentiated by type, documented in TGH's surgical units for 2015–2016. The length of stay is calculated for patients who are admitted for more than 7 days. Patient readmissions describe revisits by former surgical patients to the emergency department or surgical units within 30 days of their discharge. The revisiting patients may sometimes require additional hospital stay, which might be related to their surgical procedures.

The third indicator is based on medical pain where pain is rated on a scale of one to 10—one being the mildest pain and 10 the most severe. TGH chose numbers between 7 and 10 on the scale because a pain level between 7 and 10 that lasts for more than 24 hours is considered a patient safety issue. The final indicator denotes pressure ulcers, which are injuries caused to skin tissue resulting from prolonged pressure on the area. Patients bed-ridden after medical procedures are at high-risk of pressure ulcers. The ideal benchmark for each indicator is zero, which means that the goal of TGH is to prevent extended stays, readmissions, prolonged pain without relief, and pressure ulcers in surgical patients.