Nurse Leader Rounds: Effect on Nurse-Related Patient Satisfaction Scores on Two Post-Surgical Units in an Acute Care Facility

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Abstract

Background and Significance: The best possible inpatient experience is a priority for many hospitals in today’s model of healthcare delivery. Achieving and sustaining measurable success is a key challenge. Nurse leader rounds (NLR) has been revealed to be an effective improvement strategy in some hospitals. The purpose of this DNP project was to analyze the impact of implementing daily NLR on patient satisfaction (PS) scores in two postsurgical units at Mount Sinai Beth Israel (MSBI) hospital in New York.

Methods: This study used descriptive comparison to analyze existing survey data before and after NLR was implemented. The study took place in an academic, urban, tertiary care hospital in two postsurgical units. Data were collected using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey reflecting questions to measure patient’s perceptions of care, specifically, assessing the nurse related communication to examine if there was a relationship between NLR and PS scores.

Results: Patient perception data summarized in this study suggested that the implementation of NLR was associated with increased levels of patient satisfaction with communication (SC) with nurses following NLR in the inpatient setting on two post-surgical units. The results indicated significant difference between the pre and post scores of SC in nurse related questions referring to communication (Appendix A).

Conclusion: Effective implementation of NLR can improve patient perception of care. Improvements in nurse communication impacted PS. Areas for improvement were to focus on patient self-management of care and medication education.

Keywords: Nurse Leader Rounds, Patient Satisfaction, Nurse Leader.

Introduction

Nurse leaders (NL) are faced with various challenges, one of which is to insure a safe quality experience for hospitalized patients and their loved ones. Even though health care leaders recognize the patient’s experience is their highest priority, many struggle to balance the factors that impact this experience while providing exceptional care. A high priority of healthcare administrators is to ensure positive inpatient experiences. Nurse leaders are in a position to foster changes proactively necessary to impact patient experience. To assure consistency and quality in the delivery of care, NLR was created which a systematic process that is recommended as a best practice according to Baker and McGowan [1]. Assessing patients daily, during morning rounds by a doctor or nurse, has been part of medical practice since its existence as a profession. During rounding, healthcare providers gather information while speaking to the patient directly. Registered nurses and or physicians assess the patient, develop a trusting relationship, listen to what patients have to say about the care being provided, and are immediately available to address any concerns raised by the patient by conveying all the necessary orders to anyone responsible to follow up on addressing the patient’s needs. NLR works in a similar manner. This strategy allows NL to connect to patients, reinforce care, verify nursing behaviors, gain real-time response, achieve instantaneous service recovery, recognize staff, follow up to assure all patients needs are met, and develop a trusting relationship. NLR is a proactive approach to the delivery of care that may be one of the strategies to connect patient satisfaction, quality of care and healthcare reimbursement [1].

The new healthcare reform known as “Obama care” that was passed by Congress in 2010 with the primary goal to provide quality care based on best practices and proven outcomes [2]. The Center for Medicare and Medicaid Services (CMMS) is responsible for establishing and maintaining guidelines for hospitals to receive governmental healthcare reimbursement [2]. The new reimbursement system links healthcare compensation directly to quality care, and pay for performance, also called a
Silver was 3 to 4 days. Both are surgical units. Seven Silver houses orthopedic surgery patients and 10 Silver has general abdominal surgery patients. Each unit has 30 bed capacity. The units were selected due to their lowest patient satisfaction scores before the implementation of the strategy.

Procedure and Implementation
In January 2014, NLR was introduced and implemented at the study site. A formal two-hour training session was conducted at a leadership meeting at the end of January 2014 to describe the purpose and expected outcomes of this NLR initiative. The meeting was led by the chief nursing officer and this researcher, a senior nurse education manager. All the nurse managers/leaders including the 10 Silver and 7 Silver nurse managers of the hospital attended (n = 36) were educated. The training included the following:

- Content introduction and use of the daily NLR tool (See Appendix B).
- Selected time of the day to round between 8 A.M. and 10 A.M., 5 days a week excluding weekends.
- All morning meetings were moved and no meetings were to be scheduled during that time moving forward.
- Internal email account created for submission of developed NLR tool.
- Challenges were discussed at divisional meetings and shared with the rest of the nursing leadership.

The nurse leader of 7 Silver had a masters in nursing science and was in the role more than 20 years. Seven Silver was a post-surgical, orthopedic unit consisted of 21 registered nurses (RN); 19 nursing assistants/patient care associates (PCA) and 3-unit secretaries associates (USA) with average patient staff ratio of 1 RN and 1 PCA to 6 patients. The nurse leader of 10 Silver was in process of completing a masters of nursing science and had been in this role more than 15 years. This was a unit for general and abdominal surgery and consisted of 24 RNs; 22 PCAs; and 3 USAs. The patient to staff ratio on this unit was 1 RN and 1PCA to 6 patients.

Protection of Human Subjects
The study was submitted for Institutional Review Board approval to Icahn School of Medicine at Mount Sinai and for the Institutional Review Board to Drexel University for a quality improvement study. Approval was obtained from IRB at MSBII and IRB Drexel after the proposal approval. Although no human participants were included in any aspect of this project, ethics associated with the general conduct of this project were considered. All data were anonymized, there was no threat to privacy or risk of breach of confidentiality to any person who completed the survey. No specific participant information could be associated with any response. Nursing staff on both units were not threatened by patient satisfaction scores. These data were used as a baseline for quality improvement projects on delivery of care and were publicly reportable.

Confidentiality and compliance with all Health Insurance Portability & Accountability Act (HIPPA) rules was followed when collecting data from HCAHPS database. No subjects were recruited for this study. All data were de-identified and could not be traced to previous individual patients. There were no diagnostic codes or other data that could be linked to any patient that would be memorable to the nursing staff. Information was stored accordingly, monitored by the researcher and shared for the purpose of this study only.

Instrument
The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is the first national, standardized, publicly reported survey that was designed by Centers for Medicare & Medicaid Services (CMMS) together with the Agency for Healthcare Research and Quality (AHRQ) to generate data on the patient’s experience of care to allow objective and meaningful comparisons between hospitals in areas that are important to patients. In 2005, HCAHPS had final approval by Federal Office of Management and Budget to be implemented nationally. As a result, voluntary collection of HCAHPS data began and first public reporting happened in 2008 [15]. Results of collected data are posted on the CMMS hospital comparison website [2]. HCAHPS offers to consumers’ data that is helpful in selecting a hospital and standardizes questions for public comparisons. A sample of all discharged adult patients 18 years and older that were admitted to the hospital and stay overnight received surveys in the mail once they leave. Hospitals submit a minimum number of surveys each reporting period.

The CMMS, survey has 25 questions which measure frequency on six categories of questions using the scale never, sometimes, usually, or always and two additional questions that are answered in a “yes” or “no” format to calculate the percentage of responses. Seven questions in the survey are nurse sensitive questions that were addressed for the purpose of the study (Appendix A) [2].

Appendix A

<table>
<thead>
<tr>
<th>Nurse Specific Items of the HCAHPS Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. During your hospital stay, how often did your nurse treat you with courtesy &amp; respect? (Never, Sometimes, Usually, Always).</td>
</tr>
<tr>
<td>2. During this hospital stay how often did the nurses listen carefully to you? (Never, Sometimes, Usually, Always).</td>
</tr>
<tr>
<td>3. During the hospital stay, how often did the nurses explain things to you in a way you could understand? (Never, Sometimes, Usually, Always).</td>
</tr>
<tr>
<td>4. Before giving you any new medicine, how often did hospital staff tell you what the medicine for? (Never, Sometimes, Usually, Always).</td>
</tr>
<tr>
<td>5. Before giving any new medicine how often did hospital staff tell or describe possible side effects in a way you could understand? (Never, Sometimes, Usually, Always).</td>
</tr>
<tr>
<td>6. During this hospital stay, did doctors, nurses or other hospital staff talk with you about whether you would have the help you needed when you left the hospital? (Yes or No).</td>
</tr>
<tr>
<td>7. During the hospital stay, did you get information in writing about what symptoms or health problems to look out for after you left the hospital? (Yes or No).</td>
</tr>
<tr>
<td>8. During your stay, did the nurse manager check on you daily to address your care and comfort needs? (Yes or No) (Centers for Medicare &amp; Medicaid Services, 2014).</td>
</tr>
</tbody>
</table>

The federal government has linked healthcare reimbursement to these HCAHPS questions demonstrating if patients are satisfied with care represented by high scores. The hospital will receive more money to provide best care to patients. Areas measured are: a) nurse
communication (questions 1, 2, and 3): b) doctor communication (questions 5, 6, and 7): c) cleanliness and quietness of the hospital environment (questions 8 and 9): d) responsiveness of hospital staff (questions 4, 10, and 11): e) pain management (questions 12, 13, and 14): f) communication about medicines (questions 15, 16, and 17): g) discharge information (questions 18, 19, and 20): h) care transitions (questions 24 and 25): and additional questions (questions 21 and 22). Best result or top box represents number of patients who give hospital a rating of nine or ten, as well as the percent of patients who report definitely “yes” to willing to recommend the hospital is rating of two additional questions [2]. For the purpose of this project only selected items were assessed before and after NLR implementation on two selected post-surgical units. HCAHPS results go hand-in-hand with clinical quality care, so by improving and sustaining improvements in hospital patient experience clinical care would also improve [15].

### Data Collection

The only existing data were used. No primary data collection occurred for the purpose of this study. Data comprised scores on the HCAHPS survey completed by patients after they were discharged from the hospital. The same instrument was used, to survey patients, prior to NLR and after the NLR implementation. Only the nurse-sensitive patient satisfaction items were analyzed for this project.

### Data Analysis

Descriptive statistics were completed on the general demographic information of the respondents to provide information of the composition of the sample. To address the aims of this study MSBI data were obtained and aggregated during the pre- and post- implementation periods of NLR from two post-surgical units. Prior to the aggregation of the data specific distributional characteristics were evaluated, such as out-of-range values and missing data. Descriptive statistics were used to summarize the responses based on the specific questions representing each of the three communication areas were used to develop a mean scores (i.e. specific to nurses, medication, and discharge) for each month during the pre and post implementation period. A hospital unit was not the level of interest in the aims of the study, the unit monthly communication scores were combined measures of pre and post implementation communication.

To address the aims of the study, three models were developed one for each of the communication areas with the monthly communication scores (i.e. nurse, medication and discharge) as the dependent variable and the timing of the measure (i.e. either during the pre or post period) as well as the NLR (the implementation) as the independent variable. To address the aims of the study, three paired independent sample t-tests (i.e. nurse, medication and discharge communication areas) were performed and mean differences were evaluated in the pre and mean differences evaluated in the post scores. The alpha level for all the analyses performed was set at 0.05. The assumptions for the equal variance differences were evaluated in the pre and post scores. The alpha level for all the analyses performed was set at 0.05. The assumptions for the equal variance were assessed to assure appropriate reporting of the findings.

In those communication areas which were found to not be significantly different after exposure to the implementation, an assessment for the need for an additional item-level analyses were completed to provide a more detailed evaluation. The criteria for the additional analysis was based on the likely presence of a ceiling effect. If the pre and post scores were both high (i.e. within or above the standard of care) and non-significant, then no additional analysis was completed. If a communication score was lower than the expected standard of care, additional item-level paired t-tests were completed.

### Results

The questions used to define each of the communications scores and their response distributions for the pre and post implementation periods can be found in (Appendix A).

#### Aim 1

The result of the analysis to address aim 1: the first objective was to examine if there was a difference in the percentile scores of patient satisfaction with communication (SC) with nurses following NLR implementation. The mean pre-NLR implementation from all of the units was compared to the mean of the same units post exposure to NLR. The sample included 12 observations from the pre and 12 observations which were provided by 44 patient reports
during the pre-period and 40 patient reports during the post period. The mean scores and results for the paired t-tests for each aims comparing pre and post implementation means are presented in (Table 1) and in text below.

SC pre score mean was .763, SD = .124, n = 44, and SC post score mean was .825, SD = .105. The assumptions of equal variance for the paired t-test were met by Levene's Test for Equality of Variances F = .42, df = 82, p = .52. The results of the paired t-test indicated there was significant difference between the pre and post scores (t (82) = -2.45, p = .016) and a mean difference of 6.2 percent indicating an improvement in the post score. Based on data result the analysis is that there was a significant improvement of PS with communication SC (courtesy, respect, listen and explain) following NLR implementation.

### Mean percentile score of aims pre and post

<table>
<thead>
<tr>
<th>Aim</th>
<th>Time</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Std.Error M</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>pre</td>
<td>44</td>
<td>.76345</td>
<td>.123556</td>
<td>.018627</td>
<td>-2.45</td>
<td>82</td>
<td>.016*</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>40</td>
<td>.82515</td>
<td>.105325</td>
<td>.016653</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMM</td>
<td>pre</td>
<td>33</td>
<td>.57518</td>
<td>.166526</td>
<td>.028988</td>
<td>-1.13</td>
<td>61</td>
<td>.262</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>30</td>
<td>.62447</td>
<td>.178752</td>
<td>.032635</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-question analysis Nurse told you what the medication is for</td>
<td>pre</td>
<td>11</td>
<td>.71755</td>
<td>.155293</td>
<td>.046823</td>
<td>-.79</td>
<td>19</td>
<td>.44</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>10</td>
<td>.77140</td>
<td>.156905</td>
<td>.049618</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff described medication side effects</td>
<td>pre</td>
<td>11</td>
<td>.43282</td>
<td>.100228</td>
<td>.030220</td>
<td>-.95</td>
<td>19</td>
<td>.356</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>10</td>
<td>.47760</td>
<td>.116507</td>
<td>.036843</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDI</td>
<td>pre</td>
<td>33</td>
<td>.85691</td>
<td>.097510</td>
<td>.016974</td>
<td>.795</td>
<td>61</td>
<td>.451</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>30</td>
<td>.83840</td>
<td>.095782</td>
<td>.017487</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p < .05 considered significant,
Abbreviations: SC = nurse communication, SMM = communication about medication, SDI = discharge information, (n) number, (M) mean, (SD) standard deviation, (Std. Error M) standard error mean, (p), probability (p), (t) t-test and (df) degrees of freedom

### Aim 2
The result of the analysis to address aim 2: the objective was to examine if there was a difference in the percentile scores of PS with medication management (SMM) (i.e., communication about new medicines, side effects) following NLR implementation. The sample included 12 observations from the pre-and 12 observations which were provided by 33 patients during the pre-period and 30 patients during the post-period. SMM pre score mean was .575, SD = .167, n = 33 and the SMM post score, mean was .624, SD = .179, n = 30. The assumptions of equal variance were met for the paired t-test by Levene's Test for Equality of Variances F = 0.338, df = 61, p = .563. The results of the paired t-test indicated there was no significant difference between the pre and post scores (t (61) = -1.13, p = 0.262). The SMM medication communication score was a composite score derived from two questions. The patient responses suggested that approximately 40% of those responding may not have received adequate communication. Given the importance of this area, each individual item was evaluated to provide information for further implementations.

To evaluate the potential impact of the implementation of the individual item each was evaluated independently using the paired t-tests. For the question “How often did nurse tell you what the medication was for?” The pre score mean was .718, SD = .155, n = 11 and the post score mean was .771, SD = .156, n = 10. The results of the paired sample t-test was non-significant (t (19) = -.79, p = .44). For the question “How often did the nurse describe medication side effects?” the pre score mean was .433, SD = .1, n = 11 and the post score means was .478, SD = .117, n = 10. The results of the paired t-test were non-significant (t (19) = -.95, p = .356). Based on the data result the analysis is SMM (communication about medicines, side effects) did not improve knowledge of patient’s medications or side effects followed by NLR.

### Aim 3
The result of the analysis to address aim 3: this focus was to examine if there was a difference in the percentile score of patient satisfaction with discharge information (SDI) (information about help, signs and symptoms to look for at home) following NLR implementation. SDI pre score mean was .857, SD = .098, n =33 and the SDI post score, mean was .838, SD = .096, n = 30. The assumptions of equal variance for the paired sample t-test were met by Levene's Test for Equality of Variances F = .338, df = 61, p = .563. The results of the paired t-test indicated there was no significant difference between the pre and post scores (t (61) = -1.13, p = 0.262). The SMM medication communication score was a composite score derived from two questions. The patient responses suggested that approximately 40% of those responding may not have received adequate communication. Given the importance of this area, each individual item was evaluated to provide information for further implementations.

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### Aim 4
The results from the previous aims were used to infer the need for modification in the NLR implementation and no statistical analysis was used to derive this result. The inference was drawn from both interpretations of the three nurse specific communication areas effect and evaluation of ceiling effects observed. The results from previous aims indicated no change in the implementation to improve patient satisfaction of nursing communication based on improvements observed. The results from the communication about medication indicated the need for modification of NLR as the implementation failed to demonstrate a significant effect in this communication area which has high impact on future patient outcomes. Given the strength in communication related to discharge prior to the implementation this area should remain the same or be de-emphasized (for these specific units).