Relationship-Based Care: Primary Nursing as a Practice and Outcomes to Evaluate Effectiveness

THESIS

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By

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Abstract

The role of the Primary Nurse was introduced under the Relationship-Based Care (RBC) Professional Practice Model at a freestanding cancer center on the campus of one of the nation’s largest public universities. The Primary Nurse Role was established to meet the need for a more patient-centered care delivery model aimed at providing a more caring and healing environment for patients and families.

While Primary nursing has been adopted and praised across the country, there is limited research on whether or not Primary Nursing truly impacts a patient’s perception of care or clinical outcomes. In fact, organizations have struggled to show how Primary Nursing activities have impacted patient care. This study explored the Relationship-Based Care nursing framework and its component, Primary Nursing.

In order to evaluate the impact of the Primary Nurse role in an inpatient oncology setting, outcome measures included in the analysis were Press Ganey Associates® patient satisfaction questionnaire results, NDNQI (The National Database of Nursing Quality Indicators) results of the Percent of Unit Acquired Pressure Ulcers, Fall Rates as well as Falls with Injury, Assisted and Unassisted Falls and results of Relationship-Based Care (RBC) Primary Nurse Audits that were internally developed to quantify the implementation of the Primary Nurse role.
Acknowledgments

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Fields of Study

Major Field:  Allied Medical Professions
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Chapter 1: Statement of the Problem

Ranked as one of the top cancer hospitals in the nation, this 228-bed adult cancer clinical care facility is one of 11 DRG (Diagnosis-related Group) - or PPS (Prospective Payment System) exempt institutions in the United States due to their specialization in cancer care. The cancer program features a National Cancer Institute (NCI)-designated Comprehensive Cancer Center aligned with a nationally ranked academic medical center and a freestanding cancer hospital on the campus of one of the nation's largest public universities. As an academic medical institution, their multidisciplinary and multimodality approach to cancer care includes disease-specific groups in which surgical oncologists, medical oncologists, pathologists, radiologists, radiation oncologists, nurses, researchers and others collaborate to provide the latest in cancer diagnosis, treatment and prevention. The program is fully accredited by Joint Commission, the American College of Surgeons Commission on Cancer, and the Foundation for the Accreditation of Cellular Therapy; it is also consistently ranked among the top hospitals in America by U.S. News & World Report and The Leapfrog Group, and was most recently awarded Magnet Status for Nursing Care.

In May 2012, the need for a more patient-centered care delivery model spurred the cancer program to adopt the Relationship-Based Care (RBC) Professional Practice Model, which aims to provide a more caring and healing environment for not only patients and their families, but also for staff caring for these patients (Ezekielian 2012).
The role of the Primary Nurse was introduced as part of this model. Primary Nursing remains at the center of the Relationship-Based Care Professional Practice Model.

According to Marie Manthey, who is considered to be the founder of the establishment of the Primary Nurse role:

*Primary Nursing is a delivery system designed: 1) allocate twenty-four-hour responsibility for each patient’s care to one individual nurse, and 2) to assign this nurse as the actual provision of her patient’s physical care whenever possible. The Primary Nurse leaves information and instructions for her patient’s care when she is off duty, so the nurse who relieves her knows about the patient as a person and exactly how care should be administered in this particular case. The Primary Nurse also has major responsibility for preparing the patient and/or his family for discharge.* (2010, xix)

It is thought that oncology patients in particular may benefit from Primary Nursing adoption with its emphasis on individualized patient-centered care. The Primary Nurse assumes responsibility for coordinating the patient’s care across disciplines and providers.

The cancer program embarked on their RBC and Primary Nursing implementation in partnership with a nurse consulting group of nurses based in Minneapolis, Minnesota. This collaboration created the organizational infrastructure necessary to support the facility-wide adoption of the Primary Nurse role.

Implementation of the Primary Nurse role was rolled out in a series of five Waves, each Wave acting as a series of inpatient, ambulatory, and laboratory units all working towards the implementation of the Primary Nurse role within the same timeframe. Wave 1 and Wave 2 began their Primary Nurse implementation in May 2012. This study will review results of these inpatient units within the first two waves due to
same timeframe of outcomes data, similar in their setting as an inpatient unit, and as the first two groups to employ this new framework.

On the unit level, each was asked to create a unit RBC council. Each council is comprised of at least 20% of unit staff led by a co-chair who works closely with a facilitator from the Education Department. The unit councils report to Nurse Managers, Nursing Directors, and the RBC Results Council. Each unit council crafted their own unique visions applicable to their patient populations and in alignment with the organization’s shared vision for RBC (Johnson 2012, 7). The Primary Nurse role was operational for two years and has not been evaluated for its effectiveness. Thus, the purpose of this study was to evaluate: 1) understand the relationship between Primary Nurse implementation and reduction of patient falls and/or pressure ulcer prevalence; 2) unit progress toward reaching performance goals in impeding the Primary Nurse role; and 3) impact of Primary Nursing on patient satisfaction.

**Background of the Problem**

While Primary Nursing has been widely adopted and praised by hospitals across the United States, there are few published studies that provide convincing evidence that primary nursing is superior to other methods of care delivery. However, some organizations have credited RBC with positive results related to assistance for eating and drinking, elimination, care coordination, discharge concerns, and comfort and family concerns (Cappabianca, Julliard, Raso & Ruggiero, 2009). Most evidence in support of Primary Nursing is founded on anecdotal and descriptive reports rather than evidence-based data that employ controls, objective measurement of variables, and appropriate
statistical analysis of predicted outcomes (Sellick, Russell, and Beckmann 2003, 545). Measures are further difficult to capture with the changing landscape of the hospital setting. For example, changes in staff members, changes in patients, lack of randomization and other confounding factors can influence the quality of nursing care (Fairbanks 1981, 53).

Hence, the RBC Results Council Outcomes Workgroup was challenged to identify the appropriate baseline and outcome measures needed to get a clear picture and understanding of how Primary Nursing should be measured within the organization. The charge of this group was to identify measures that could serve as an evaluation of the rollout of Primary Nursing. This multidisciplinary group, consisting of Data Management, Leadership, and Nursing, sought to identify existing and potential future measures that would serve to produce data from an organization level down to the Wave and unit levels of detail.

The Outcomes Workgroup selected to use data from the Press Ganey Associates® inpatient oncology patient satisfaction survey used by the cancer program. The Outcomes Workgroup chose to evaluate all inpatient units on their Press Ganey Associates® performance for the following two patient survey questions “How well the nurses kept you informed” appearing in the Nurses section of the survey and “How well staff worked together to care for you” appearing in the Overall Assessment section of the survey. Each nursing unit was able to work with their unit council leadership to identify two additional Press Ganey Associates® patient satisfaction questions specific to the unit’s interest.
Inpatient units selected six additional Press Ganey Associates® questions to use, bringing the number of questions examined for RBC Primary Nursing to eight.

The Outcomes Workgroup moved forward and selected two additional outcome measures, understanding the need and importance to identify which measures would be Service Oriented, linked to Financial Performance, and most importantly, Clinical in nature. As an example, many existing outcome measures that were already in place were considered NDNQI Nursing-Sensitive Indicators (NSIs). Nursing-Sensitive Indicators as defined by the American Nurses Association capture care or outcomes that are most impacted by direct nursing care (American Nurses Association 2004). Several of these measures include Patient Falls, Pressure Ulcers, Patient and Staff Satisfaction, Skill Mix of Staff and Nursing Care Hours per Patient (Koloroutis 2011, 223). While the Nursing Practice model within the organization continued to evaluate numerous NSI rates, the RBC Outcomes Workgroup chose to limit the number of indicators to Pressure Ulcer Prevalence and Patient Falls as a starting point.

In the case of a Pressure Ulcer, its occurrence can expose the patient to not only physical pain, but future healthcare complications as well as unnecessary and avoidable healthcare costs. According to the Agency for Healthcare Research and Quality’s toolkit for “Preventing Pressure Ulcers in Hospitals”, pressure ulcers can cost anywhere from $20,900 to $151,700 per pressure ulcer and can result in nearly 60,000 patient deaths annually (Berlowitz et al. 2014, 11).

In the case of a Fall, it is a nurse’s responsibility to assess a patient’s risk for fall or fall related injury. Their ability to appropriately assess a patient’s risk of falling or
injury leads into the appropriate care planning and implementation strategies to minimize fall risk. Falls, especially in the oncology setting pose many risks to patients. They are routinely receiving treatments that can cause fatigue, weakness, and deconditioning and these treatments place this patient population at a higher risk of falling. Additionally, oncology patients can be at a higher risk for injury from falls due to treatment and disease-related side effects. Reviewing the organization’s fall rate helps illustrate the effectiveness of fall reduction strategies.

Because the Outcomes Workgroup were still without a way to truly capture how to assess whether or not patients were being assigned a Primary Nurse, the Outcomes Workgroup created a RBC Primary Nurse Audit Tool that would be completed on one day each month by each nursing unit on a day of their choosing. The tool included unit summary data, process and documentation measures, and a patient/family interview.

With the selection of these outcome measures the Outcomes Workgroup decided to evaluate the impact of the Primary Nurse role on selected inpatient units in the hospital.

**Purpose of Study**

The purpose of this study was to evaluate: 1) understand the relationship between Primary Nurse implementation and reduction of patient falls and/or pressure ulcer prevalence; 3) unit progress toward reaching performance goals in implementing the Primary Nurse role; and 3) impact of Primary Nursing on patient satisfaction.
Significance of Study

There is limited research on whether or not Primary Nursing impacts a patient’s perception of care or their clinical outcomes. The research questions are unique to a subset of cancer patients that could benefit from Primary Nursing which could ultimately model the way for hospitals across the nation also serving this patient population. In Marie Manthey’s July 23, 2013 blog post “The Premier Primary Nursing Hospital in the United States”, Manthey praises this organization:

What I saw was like a dream come true for me. I saw staff nurses free and motivated to creatively solve patient’s care problems!...It is about leadership based on common sense and a cultural infrastructure of safety for the risk-taking of creative problem solving. It thoroughly convinces me that Primary Nursing can be done…and MUST be done. Our patients deserve this level of care and our nurses deserve this kind of high-trust, high-integrity institutional environment.

The implementation of RBC and measuring the effectiveness of its Primary Nurse role is at the national forefront of nursing research. Many organizations have struggled to show how Primary Nursing activities have impacted patient care. “To be truly motivating, data and measurement processes must be seen as trustworthy, tangible, and useful – relevant from the point of care to the boardroom” (Koloroutis 2011, 216).

Research Questions

1. Is there a decrease in the overall Inpatient Fall and Pressure Ulcer Prevalence rates following the implementation of the Primary Nurse role?

2. Is there a difference between units in the assignment of Primary Nurse role rate per the results of RBC Primary Nurse Audit?

3. What is the patient’s perception of the value of a Primary Nurse Assignment?
4. What is the difference in results of Press Ganey Associates® Patient Satisfaction questions following the implementation of the Primary Nurse role?

   a. Nursing Section: “How well the nurses kept you informed”
   b. Overall Assessment Section: “How well staff worked together to care for you”
   c. Nursing Section: “Nurses’ attitude toward your requests”
   d. Personal Issues Section: “Response to concerns/complaints made during your stay?”
   e. Personal Issues Section: “Staff effort to include you in decisions about your treatment”
   f. Personal Issues Section: “How well staff explained their roles in your care”
   g. Visitors and Family Section: “Staff attitude toward your visitors”
   h. Personal Issues Section: “Degree to which hospital staff addressed your emotional needs”

**Definition of Terms**

- **Average Daily Census:** Equivalent Patient Days divided by the number of days in a month
- **ALOS:** average length of stay and represents the sum of inpatient days including number of patients transferred to the unit divided by number of patients in a month
- **Current Unit Census:** number of patients on unit at a particular time (midnight)
- **Pressure Ulcer:** an injury caused by unrelieved pressure that damages the skin and underlying tissues and range in severity from mild with minor skin reddening to severe with deep craters down to muscle and bone (Agency for Healthcare Research and Quality 2007)
- **Equivalent Patient Days:** Patient Days are reported in a calendar month for each unit that represents in theory a 24 hour patient stay at a midnight census. The
Equivalent Patient Days include Short Stays (patients who stay fewer than 24 hours) and are added to the value of Patient Days

- NDNQI: The National Database of Nursing Quality Indicators
- NSI: Nursing-Sensitive Indicator
- NQF: National Quality Forum
- Primary Nursing (PN): a delivery system for nursing at the unit level that facilitates professional nursing practice
- Relationship-Based Care (RBC): the Professional Practice Model that aims to provide a more caring and healing environment for not only patients and their families, but also for staff caring for these patients
- RBC Wave: group of units implementing RBC and Primary Nursing during the same time period

**Limitations**

There are many attributable factors that could positively or negatively impact patient satisfaction scores. Patient Satisfaction scores pre and post-implementation of the Primary Nurse role are not the same group of patients, which limits individual comparison. Results of the RBC Primary Nurse audit may be subject to bias in that the day of the audit is chosen at the unit’s discretion.

Only a small number of units were selected for evaluation of outcomes due to the availability of existing data already shared and reported, such as the Primary Nurse Audit Results, Falls, and Pressure Ulcer Prevalence data and units of comparison were consistent in their implementation timelines for introducing the Primary Nurse role.
The study was not subject to randomization due to selected outcome measures chosen for analysis. Results following implementation of Primary Nurse role were observational.

The units selected represent a subset of the oncology population. Results obtained may not be generalizable to other hospital inpatient settings.
Chapter 2: Review of Literature

A literature search was conducted using the following databases: Medline Ovid, Cochrane Library, PubMed, EBSCO, and Google Scholar. The MeSH search terms used were primary nursing, primary nurse role, outcomes, measures, oncology, cancer, patient satisfaction, Press Ganey, nursing sensitive indicators, falls, and pressure ulcers in various combinations.

History of Primary Nursing

It wasn’t until the early 1970s that Primary Nursing became recognized as an organizational concept in the United States (Pontin 1999, 584). Marie Manthey is credited with developing the concept of Primary Nursing as outlined earlier – the framework being twenty-four-hour responsibility for each patient and when the Primary Nurse is off unit, that the care for the patient is passed on to the next nurse. However, this Primary Nurse manages the continuum of patient care from the time of admission to the time of discharge from that unit.

Manthey’s Primary Nursing role was created to drive nursing practice from being focused on daily tasks and duties to a practice where a nurse truly focuses on the patient. Leading up to the inception of Primary Nursing is a rich historical perspective of the nursing profession. It was not until the 1960s that healthcare consumers became so frustrated with the nursing care delivery model that nurse retention became a serious concern. This caused a discontinuation in patient care that likely could have resulted in
poorer outcomes. It was around that same time that the professional nurse curriculum emerged and many nursing units took on a unit management formation that helped to facilitate more patient care. Unfortunately, studies showed that this change in unit leadership did not allow for more time in patient care (Manthey 2010, 17-18). The University of Minnesota then sought to identify why a team-based approach to nursing care was not streamlining nursing practice. Root causes identified in their research concluded: 1) Fragmentation in Care; 2) Complex Channels of Communication; and 3) Shared Responsibility and Lack of Accountability. The Fragmentation in Care resulted from all those working beneath registered nurses (e.g. Nurses’ Aids, staff obtaining blood draws, delivery of meals to the patient, etc.). While all are important in purpose, all can be considered interruptions, and in some cases distractions, in patient care. The Fragmentation of Care directly impacted the second problem, Complex Channels of Communication as described by Manthey. To illustrate, what about a patient who has a dietary need based on medications administered? Whose responsibility is it to identify the need and to communicate to the appropriate party to ensure an appropriate meal is delivered to the patient? Lastly, the Shared Responsibility and Lack of Accountability can be illustrated by the complex nature of a Patient’s Plan of Care. Multidisciplinary involvement in a patient’s Plan of Care can further complicate the flow of communication across disciplines and all those caring for a patient at any given time (Manthey 2010, 19-21). While multidisciplinary care is essential, without a driver and coordinator to manage it, it can create another complex channel.
While Manthey is widely acknowledged as the pioneer of Primary Nursing, David Pontin also cites the work of Lydia Hall at the Loeb Centre in New York who also focused on patient centric care, leveraged inter-personal relationships and embedded many similar concepts of Primary Nursing into practice. In Pontin’s article *Primary Nursing: a mode of care or a philosophy of nursing*, he explores whether or not Primary Nursing itself represents a philosophical care delivery method versus a way to organize the care delivery from nurse to patient (1999, 584). In fact, it was the work done at Loeb that heavily influenced Marie Manthey’s Primary Nursing framework, more specifically its patient-centeredness component. Pontin describes Loeb’s practice of patient-centeredness as “nurses and doctors emphasize the comforting, caring aspects of their roles. Patients are actively involved in planning their care, and records of care are patient-centered rather than being occupationally oriented” (1999, 585).

Pontin describes Manthey’s Primary Nurse role as an operational framework and organizational system used to carry out Lydia Hall’s patient-centeredness method of care delivery. While defining Primary Nursing can be confusing in this regard, Pontin introduces the work of Hegyvary who in an attempt bring clarity describes how “Primary nursing is both a philosophy and an organizational design. It is not simply a way of assigning nurses to patients, but rather a view of nursing as a professional patient centered practice” (Hegyvary 1982, 181). In summary, Pontin points out that it is through this context that both frameworks can share the same meaning.

Outlined in the study *Primary nursing: an evaluation of its effects on patient perception of care and staff satisfaction*, outcomes were chosen to evaluate patients’
perception of care and staff satisfaction (Sellick, Russell, and Beckmann 2003, 545).

Sellick, Russell, and Beckmann sought these measures to serve as a valid measure to evaluate their Primary Nurse delivery.

A patient satisfaction instrument was developed for the purpose of their study. The 11 item questionnaire contained ten items directly related to patients’ perception of nursing care they received. Six items yielded a statistically significant difference in favor of primary nursing among the experimental and control units in response to the following survey items:

- **Item 6:** Has a nurse talked to a member of your family or friends about your illness and hospitalization? (Y/N)
- **Item 8:** Did the nurse spend time with you discussing your condition/illness? (Y/N)
- **Item 5:** How well do you think the nurses understood you? (rated on a 3-point scale)
- **Item 7:** How much interest did the nurses show as to the effects of your illness on your family? (rated on a 3-point scale)
- **Item 10:** How much did the nursing care contribute to this? (rated on a 3-point scale)
- **Item 11:** How well has a nurse helped you prepare and plan for when you leave hospital? (rated on a 3-point scale)

Results show that nurses on a Primary Nursing unit were perceived to have a greater understanding of the patient (item 5), showed more concern and communicated more with the patient’s family (items 6 & 7), were more likely to give information to the patient regarding his/her illness or condition (item 8), tended to contribute more to a positive experience of hospitalization (item 10), and have greater consideration to discharge planning (item 11). These findings were compatible with the basic philosophy of primary nursing, which emphasizes accountability, patient-centered individualized care, and continuity of care.
While the questionnaire was able to prove face validity, the study could have benefited from a standardized instrument that was subject to validly and reliability checks (Sellick, Russell, and Beckmann 2003, 550). The need for further evaluation of metrics was also of note.

According to the study *Outcomes of nursing care: the case of primary nursing*, the most widely measured outcome for patients in the United States is patient satisfaction (Thomas and Bond 1991, 293). The majority of studies found no significant difference in patient satisfaction among units operating under a Primary Nursing delivery model versus those under another organizational structure (Thomas and Bond 1991, 293). The studies evaluated included many with institutionally developed instruments utilized to evaluate the patient satisfaction scores specific to the study. Only three of ten studies who used an instrument adopted an evidence-based scale or checklist to evaluate patient satisfaction (Thomas and Bond 1991, 294-295). Other outcomes captured include Length of Stay that was significantly shorter for the Primary Nursing Group in a sampling of renal transplant patients (Jones 1975), as well as Nosocomial infections, accidents, or complaints, which yielded no significant difference (Chavigny and Lewis 1984). Further, Thomas and Bond describe the need for research in first defining how Primary Nursing operates in practice and secondly establishing which aspects of the process results in particular outcomes for both patients and nurses (1991, 309-310). The case study brings light to the fact that there is little consensus as to whether Primary Nursing results in improved outcomes for patients and nurses. With the majority of studies omitting operational definitions of
primary nursing, there is a great need for future studies to identify which aspects of care provision can yield favorable outcomes (Thomas and Bond 1991, 312).

The in-depth study *Primary nursing: more data* reported by Eichhorn and Frevert evaluated patient satisfaction using the Quality Patient Care Scale (QUALPACS) (Fairbanks 1981, 53). Data available on quality of care was regarded as “sketchy and inconclusive” (Fairbanks 1981, 60). Measures are critical to evaluate primary nursing and process and outcome measures are central to evaluating the adoption of Primary Nursing.

Houser et al. were able to conclude in their study *Involving Nurses in Decisions Improving Both Nurse and Patient Outcomes* that involving nurses in decisions about patient care, work methods, and organizational effectiveness has an impact on nurse satisfaction, nurse retention, avoidance of adverse events, and infections (2012, 375). These outcomes were evaluated among units varying from low to high levels of involvement. While nurse involvement was evaluated on the bases of the work of Weston (2008), the criteria to evaluate Clinical Autonomy, Work Autonomy, and Control over Clinical Practice (Houser et al. 2012, 376) encompasses much of what the role of a Primary Nurse is (e.g. identifying a problem, developing a solution, selecting solutions to implement, and involvement in implementation), similar to the I2E2 formula for change developed by Jayne Felgen used in tandem with RBC representing the four elements *Inspiration, Infrastructure, Education* and *Evidence* needed for change in an organization (Koloroutis 2011, 6-9). Houser et al. concluded that units involved in planning for staffing had higher patient satisfaction with nursing care than units with low involvement (2012, 379). The process of assigning a primary nurse could be considered planning for
staffing in this example and possibly translate in results of analysis. It was the accountability for efficacy of decisions and involvement in outcomes evaluation that was associated with reduced infections and incidence of pressure ulcers (Houser et al. 2012, 380).

In an era of Primary Nursing and its limited research tied to its positive outcomes, Ryan and Logue in their study of Developing an audit tool for primary nursing attempt to isolate key elements of primary nursing in a measurable form (Ryan et al. 1998, 418) in hopes of realizing its potential for clinical practice as a result of their exploratory study. A 33-page book of 38 pre-formulated questions divided into nine sections was created for the study by a core group tasked with its formation. The tool was influenced by the earlier work of D. Mead’s An Evaluation Tool for Primary Nursing (Mead 1991). Mead’s tool was shortened from 16 dimensions of primary nursing to nine for their audit. The tool evaluates unit’s philosophy of care; organization of staff and environment; availability of information on primary nursing on the unit; accountability; responsibility and autonomy of primary nurse in decision-making relating to his/her assigned patients, patient/carer knowledge of primary nursing; participation in care planning; continuity of care; care planning, delivery, and the interface between primary and associate nurse roles and lastly communication and transfer of information as it relates to the primary nurse role at the center of process (Ryan et al. 1998, 419).

The study is described as pioneering work in that there are no other studies published that describe what results of a primary nurse audit should conclude (Ryan et al. 1998, 420). Ryan and Logue suggest that with average scores of 65 for many elements of
the audit, any score over 70 is reasonable to consider top of the range, and scores above 80 are considered high (Ryan et al. 1998, 420).

The study reviews data available from only one month for a period of 1 year post implementation and adoption of primary nursing within the organization for only a small subset of units across its enterprise. The exploratory study does show the value of capturing primary nurse data in the form of an audit while also revealing how complex it is to measure primary nursing elements (Ryan et al. 1998, 423).

Ryan and Logue recommend further research to explore the impact of primary nursing via audit and to carefully select criteria representative of the care setting and involve multiple methods of data collection (1998, 422). This would better allow for further testing for reliability and validity.

The study *Outcomes of implementing primary nursing in the care of people with chronic lung diseases: the nurse’s experience* illustrates Jonsdottir’s focus on outcome measurement tied to the experience of nurses’ following the implementation of Primary Nursing. Interviews were conducted from nine months to 21 months after the adoption of primary nursing (Jonsdottir 1999, 238). Narrative feedback was obtained and was grouped into themes to answer the research question “what is the outcome of the change”. The themes that emerged included: 1) close relationships with patients; 2) continuity of care; 3) reports of satisfied and secure patients; 4) centrality of individual patient’s needs; 5) constant refinement of the system; 6) sensitivity to staffing load; and 7) ambitious and responsible nurses (Jonsdottir 1999, 238). Close relationships with
patients were highly regarded as a new positive dimension to their nurses’ role (Jonsdottir 1999, 238).

Susanne Suchy and JoAnn Maklebust describe the implementation of Relationship-Based Care in a Comprehensive Cancer Center:

*RBC promotes organizational health resulting in positive outcomes in all critical arenas that measure success. RBC is comprised of three critical relationships: the care provider’s relationship with patients and families, self and colleagues. When compassion and care are conveyed through touch, a kind act, through competent clinical interventions, through listening and seeking to understand the other’s experience, a healing relationship is created. This is the heart of RBC.* (Suchy and Maklebust 2007)

Future implementation of their RBC program will include exploring Press Ganey Associates® scores in hopes of improving satisfaction.
Chapter 3: Methodology

The results were obtained from a large academic medical center situated in the Columbus Ohio Metropolitan area. Four inpatient units were selected for analysis on basis of Primary Nurse Role implementation. Units will be referred to as Units A, B, C and D. Unit A (17 beds) is comprised of Acute Leukemia and Hematology patients. Unit B (25 beds) is post-surgical in nature and includes short stays for Breast, Thyroid, Sickle Cell, Prostate, GI, and GU services respectively. Unit C (34 beds) has a medical oncology focus with Lymphoma and Leukemia disease service lines. Lastly, Unit D (24 beds) includes Bone and Marrow Transplant patients. While these units tend to be disease and service line oriented, there are always the few instances where an off-service patient may be admitted to one of these units. See Table 1 for a summary of the populations included in the study.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Population</th>
<th>Bed Count</th>
<th>Average Daily Census</th>
<th>ALOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit A</td>
<td>Acute Leukemia and Hematology</td>
<td>17</td>
<td>14.56</td>
<td>11.81</td>
</tr>
<tr>
<td>Unit B</td>
<td>Post-surgical in nature and includes short stays for Breast, Thyroid, Sickle Cell, Prostate, GI, and GU services</td>
<td>25</td>
<td>19.02</td>
<td>4.20</td>
</tr>
<tr>
<td>Unit C</td>
<td>Medical oncology focus with Lymphoma and Leukemia disease service lines</td>
<td>34</td>
<td>29.70</td>
<td>5.63</td>
</tr>
<tr>
<td>Unit D</td>
<td>Bone and Marrow Transplant</td>
<td>24</td>
<td>22.04</td>
<td>13.07</td>
</tr>
</tbody>
</table>

Table 1. Summary of Units of Study for time period Q4 CY11 – Q1 CY12 and Q4 CY12 – Q1 CY13
Data Collection

Data used for analysis in this study was comprised of existing data collected through a primary nurse audit tool, Nursing-Sensitive Indicators of falls and pressure ulcer prevalence, and patient satisfaction as measured by a Press Ganey Associates® post discharge survey tool. Since the data used in the study was existing, at a summary level, and originally created for non-research purposes, IRB approval was not required for this study.

Falls and Pressure Ulcers

Nursing-Sensitive Indicators (NSIs) are the outcomes used to determine if there is an improvement in the quality of nursing care (American Nurses Association 2013). Several NSIs appearing on the full list of evidence-based indicators including Falls and Pressure Ulcers have been the topic of measurement for the purposes of evaluating Primary Nursing activities internally. With Nursing-Sensitive Indicators used across the nursing profession, the Outcomes Workgroup chose to measure the incidence of Falls and Pressure Ulcers as additional outcome measures that align with the principals of Relationship-Based Care and Primary Nursing. The data sources to measure falls and pressure ulcers are described below.

Falls: The American Nurses Association reports falls data in the form of a Patient Fall Rate or Total Falls per 1,000 Patient Days and is calculated as $(\text{Total number of falls/Patient Days}) \times 1,000$ (National Quality Forum 2013). Inpatient falls are identified via Incident Reporting and are defined as a sudden, unintentional descent, with or without injury to the patient that results in the patient coming to rest on the floor, against some
other surface, on another person, or on an object. Falls are reported to The National Database of Nursing Quality Indicators (NDNQI) and reports made available show fall rates as well as falls with injury. 100% of reported falls are included in analysis of NDNQI data and each fall has an Injury Level assigned in alignment with NDNQI defined values such as: No Injury, Minor Injury, Moderate Injury, Major Injury or Death. As a Nursing-Sensitive Indicator, fall rates are endorsed by the National Quality Forum (NQF). The National Quality Forum is a private sector standard-setting organization that endorses measures used to standardize performance measurement and improved quality of healthcare in the United States. Their endorsed measures are peer reviewed to ensure they are reliable and comparable for performance improvement processes and have been adopted for use in public reporting to state and federal agencies, for Pay for Performance by Centers for Medicare & Medicaid Services, as well for internal quality improvement activities within organizations and are therefore appropriate for study (National Quality Forum 2014). According to Joint Commission, falls are the largest category of self-reported incidents in acute care facilities (2005). Centers for Disease Control and Prevention equate the cost of fall injury in a hospital setting to an average of $34,294 per patient in 2012 dollars (2014).

A two sample z-test of proportions with an alpha level of 0.05 was used to test for a reduction in falls after the implementation of the Primary Nurse role (White 2013, 72).

**Pressure Ulcers:** The Pressure Ulcer Prevalence Indicator is a cross-sectional count of the number of cases on the unit and measures the total number of persons with a pressure ulcer on a hospital unit on the day of the NDNQI pressure ulcer survey based on
a one-day prevalence study (NDNQI 2013, 26). Pressure Ulcer Prevalence data reflects 100% of patients on each unit at the time of the prevalence study. As a Nursing Sensitive Indicator, pressure ulcer prevalence is appropriate for study. The Percent of Surveyed Patients with a Unit Acquired Pressure Ulcer (or % UAPU) is the \( \frac{\text{Total number of patients with unit acquired ulcer}}{\text{Total number of patients surveyed}} \times 100\% \).

A two sample z-test of proportions with an alpha level of 0.05 was used to test for a reduction in Pressure Ulcer Prevalence after the implementation of the Primary Nurse program (White 2013, 72).

**Relationship-Based Care (RBC) Primary Nurse Audit**

To assess the success of the Primary Nurse program, a Relationship-Based Care Outcomes Workgroup designed an audit tool: Relationship-Based Care (RBC) Primary Nurse Audit (see Appendix A) to measure on a monthly basis: 1) how many patients on the unit are assigned to a Primary Nurse; 2) continuity of Primary Nurse Assignment, and 3) the patient’s perspective of Primary Nursing. Similar to Ryan and Logue’s philosophy, the audit was not designed simply to compare one unit to another, but rather to evaluate that unit’s development and adoption of primary nursing over time (Ryan et al. 1998, 422). A one-month pilot test of the audit tool was conducted in May 2012. Units participating in the pilot test were only those active in assigning staff to a Primary Nurse role. No formal tests were carried out to assess inter-rater reliability. Feedback on the audit tool was obtained from end-users to ensure face validity. A final version of the instrument was completed by June 2012. The audit tool is comprised of three sections.
First Section: The first section of the tool includes unit demographic and summary information such as the location and date of the audit, the RBC Wave the unit is within (each Wave acting as a series of inpatient, ambulatory, and laboratory units all working towards the implementation of the Primary Nurse role within the same timeframe), the auditor’s name, the unit’s current unit census, the number of patients with and without a Primary Nurse assignment at the time of the audit and the reasons for when a patient may be without a Primary Nurse assignment (at a summary level).

Second Section: The second section of the tool refers to process and documentation measures for each patient on the unit on the day of the audit. Information collected includes whether or not the Primary Nurse was listed as the assigned Primary Nurse, if the Primary Nurse was on duty, Reasons for why a Primary Nurse was not assigned to the patient, if the Primary Nurse name was documented in the Electronic Medical Record (EMR), if the Primary Nurse had updated the EMR during the past 24-48 hours, and if the name of the Primary Nurse was provided to the patient or posted in the patient room. These responses to the questions are answered Yes or No with the exception of a narrative response for reasons why a Primary Nurse had not been assigned.

Third Section: The third and final section of the audit captured responses of a Patient/Family Interview, which serves as real-time feedback to the unit on how well they have adopted the Primary Nurse role. The auditor may ask a patient to recall if they have a Primary Nurse and to share something that the Primary Nurse has done to make a difference in their care. Information collected in this section is valuable feedback to the
unit. It provides an opportunity for staff to speak with patients about their experience and act on any items of concern shared by patients or family members.

Administration of Tool: Data from the audit comes from a variety of sources including: in person observation, interviews with patients, interviews with staff, review of medical record documentation, and collaboration with care teams if necessary. Units complete the audits one day each month on a day of the unit’s choosing. 100% of the patients on the unit on the day of the audit are included in the audit. Each unit identified a representative to complete the audit questions and paper forms were submitted either in-person, via fax, or secure email for data entry and analysis to the Quality Department. Audit forms that were submitted were entered into a Midas+ Focus Study, a custom data collection tool used to collect and track process data specific to the Primary Nurse Audit (Xerox Corporation and MidasPlus, Inc. 2013). Monthly results were compiled and sent to unit leadership including Managers, Assistant Nurse Managers, Unit RBC Chair, Unit RBC Co-Chair(s), and Directors. Unit RBC Councils were then tasked with discussing results on a unit level and identifying areas for improvement. Audit results at or above 90% were considered on target performers. Results between 75% - 89% were areas below target but not yet reaching an alarm level. Results less than 75% were at an alarm level and became the focus for unit process improvement activities. This mechanism allowed for unit representatives on RBC unit councils to provide their peers with real-time feedback of measures and results. The Quality Department also distributed results at a monthly Nursing Quality Council committee meeting where unit representatives obtained actual printouts of the data which were then posted on their unit quality bulletin boards
located in secure, non-patient care areas on each unit for staff to view, access, and
discuss. At the same time, several electronic results were then fed directly from Midas
into Statit piMD, a Performance Indicator and Management Dashboard (Midas+ Statit™
Solutions Group 2012) which provided another means for real-time dissemination of
information in order to access, track, analyze, and compare results across units and to
help identify best practices. This data viewing platform allowed for drill-down process
measure information from overall inpatient scorecards down to the unit level.

Methods used to describe the representativeness of the sample included showing
variation of audit criteria across the units of comparison of reported data from June 2012
through November 2013. The key measures included the Percent of Patients with a
Primary Nurse Assigned; categorical Reasons why Primary Nurse was not assigned when
Primary Nurse was on duty or not on duty, and the Percent of Patients who were able to
identify that they have a Primary Nurse.

A one way ANOVA Test of Variance was used in addition to a Tukey Honest
Significant Difference (HSD) test to assess the differences in unit performance in their
assignment of a Primary Nurse (White 2013, 92-98).

**Patient Satisfaction**

Patient Satisfaction was measured using a patient questionnaire maintained by
Press Ganey Associates® (see Appendix B). Results are illustrated as The Mean which
measures the central tendency or center of the grouping of scores (also known as the
Average, not percentage) and are based on patient discharge dates. In other words, it
represents the sum of all scores for a particular question divided by the number of scores
(Press Ganey Associates® 2011, 2). The survey is a 58 Item questionnaire divided into subsections or domains – *Your Care From Nurses; Your Care From Doctors; The Hospital Environment; Your Experiences in this Hospital; When you Left the Hospital; Overall Rating of Hospital; Understanding Your Care when you Left the Hospital; About You; Additional Questions about your Stay; Background Questions; Admission; Room; Meals; Nurses; Tests and Treatments; and Visitors and Family.* 100% of patients discharged from a unit receive a mail-in survey between seven and ten days after discharge or no greater than six-weeks following a patient’s stay. Response rates for a six-month period for Unit A is 30-35%; Units B and C 20-25%, and Unit D 25-35%. Sample sizes for time periods of measurement used in the analysis are outlined in the Results Chapter seen in Table 6.

With buy-in from key stakeholders, the RBC Outcomes Workgroup chose to evaluate performance in areas that closely tie to the vision of a Primary Nurse and what those roles can translate into in terms of a patient’s perception of care. Two questions were chosen including Press Ganey Associates® *Nursing* section question “*How well the nurses kept you informed*” and *Overall Assessment* section question “*How well staff worked together to care for you*”.

Additional questions for comparison included *Personal Issues* Section questions 1) “*Degree to which hospital staff addressed your emotional needs*”; 2) “*Staff effort to include you in decisions about your treatment*”; 3) “*How well staff explained their roles in your care*”; and 4) “*Response to concerns/complaints made during your stay*”.

Appearing in the *Nurses* section questions 1) “*Nurses’ attitude towards requests*” and in
the Visitors and Family section 1) “Staff attitude towards your visitors” were also included. For a summary of questions used to evaluate Primary Nursing, see Table 2.

<table>
<thead>
<tr>
<th>Section</th>
<th>Press Ganey Associates® Survey Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>How well the nurses kept you informed</td>
</tr>
<tr>
<td></td>
<td>Nurses’ attitude towards requests&lt;sup&gt;1,2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Overall Assessment</td>
<td>How well staff worked together to care for you</td>
</tr>
<tr>
<td>Personal Issues</td>
<td>Degree to which hospital staff addressed your emotional needs</td>
</tr>
<tr>
<td></td>
<td>Staff effort to include you in decisions about your treatment&lt;sup&gt;1,2,3&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>How well staff explained their roles in your care&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Response to concerns/complaints made during your stay&lt;sup&gt;3,4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Visitors and Family</td>
<td>Staff attitude towards your visitors</td>
</tr>
</tbody>
</table>

Table 2. Press Ganey Associates® Survey Questions as Primary Nurse Outcome. Note: unit’s self-selected questions appear with superscript 1 for Unit A, 2 for Unit B, 3 for Unit C, and 4 for Unit D. Questions in bold text indicate questions chosen by RBC Outcomes Workgroup to compare across units.

Two sample t-tests were used to test for differences in the relevant patient satisfaction questions with the significance level set a priori at 0.05 (White 2013, 89).

**Data Analysis**

Data analysis occurred through quantitative and qualitative methods. The timeframe used for data analysis for the Primary Nurse audit was June 2012 to November 2013. The six-month period leading up to the introduction of the Primary Nurse role served as the baseline measurement to evaluate the Press Ganey Associates® patient satisfaction results, Falls, and Pressure Ulcer Prevalence. The same six-month period one year later was chosen to assess whether or not the introduction of a Primary Nurse role had a significant impact on the chosen outcomes. See Table 3.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Before Primary Nurse Role in Place</th>
<th>After Primary Nurse Role in Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press Ganey Associates® Patient Satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falls</td>
<td>Q4 CY11 – Q1 CY12</td>
<td>Q4 CY12 – Q1 CY13</td>
</tr>
<tr>
<td>• Fall Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Falls with Injury Levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Assisted and Unassisted Falls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure Ulcer Prevalence</td>
<td>N/A (Audits began with implementation of Primary Nurse role)</td>
<td>June 2012 – November 2013</td>
</tr>
<tr>
<td>Relationship-Based Care Primary Nurse Audit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 3. Pre and Post Variables*
Chapter 4: Research Results

Chapter 4 discusses the results of the study to evaluate: 1) relationship between Primary Nurse implementation and reduction of patient falls and/or pressure ulcer prevalence; 2) unit progress towards reaching performance goals in imbedding the Primary Nurse role; and 3) impact of Primary Nursing on patient satisfaction. Results of the data analysis will be discussed by order of research questions.

Falls and Pressure Ulcers

1. *Is there a decrease in the overall Inpatient Fall and Pressure Ulcer Prevalence rates following the implementation of the Primary Nurse role?*

   **Falls:** Data reported for falls was reported according to injury level and assisted and unassisted falls as well as the fall rate. In reviewing the number of injury falls following implementation of Primary Nursing, there was an incremental reduction in the number of falls with injury (see Figure 1). Further, the number of assisted falls stayed relatively constant while unassisted falls (which pose the most danger for a patient) decreased following implementation of Primary Nursing (see Figure 2). To determine if there was a statistical difference in the number of falls before and after implementation of the Primary Nurse role, a one-sided two sample Z test for proportion was performed (Osborn 2006, 266). Results of the test did not reveal that a statistically significant difference was presented. However, the p value was \( p = 0.06 \) approaching statistical yet
not establishing statistically significant results. The fall rate resulted in a decrease by 1.01 from 3.72 to a rate of 2.70 falls per 1,000 days.

Figure 1. Injury Level Falls during Pre and Post-Implementation of Primary Nursing
Figure 2. Assisted and Unassisted Falls during Pre and Post-Implementation of Primary Nursing

**Pressure Ulcers:** A one-sided two sample Z test for proportion was conducted to determine if there was a difference between the pressure ulcer prevalence rate before the Primary Nurse role was in place as compared to the pressure ulcer prevalence rate following implementation of the Primary Nurse role (Osborn 2006, 266). A statistically significant difference at \( p = 0.05 \) was found. The pressure ulcer prevalence decreased from 1.69% to 0% following implementation of the Primary Nurse role (see Figure 3).
Figure 3. Percent of Surveyed Patients with Unit Acquired Pressure Ulcer during Pre and Post-Implementation of Primary Nursing

Relationship-Based Care (RBC) Primary Nurse Audit

2.  Is there a difference between the units in the assignment of Primary Nurse role rate per the results of RBC Primary Nurse Audit?

3.  What is the patient’s perception of the value of a Primary Nurse assignment?

Figure 4 illustrates by unit the rate of Primary Nurse Assignment over time and shows the seasonality and variability in the assignments across the units of comparison during the measurement period. For the purposes of this figure, missing monthly values were imputed by using the average of the month prior and after the missing month’s values. Unit A shows an inconsistency in their rate of assignment of a Primary Nurse role. Unit B, however, had been more consistent in the rate of their Primary Nurse
Assignment, with only one month where results were less than the 90% in the Assignment of Primary Nurse role. Unit C and Unit D showed low results and inconsistency in their rate of assigning the Primary Nurse; however they have shown improved results over time.

![Graph: Percent of Patients with Primary Nurse Assignment](image)

**Figure 4. Percent of Patients with Primary Nurse Assignment**

To explore the reasons why a Primary Nurse may not be assigned to a patient at the time of the audit, narrative responses to the question “If No – reason PN not assigned” following the question assessing whether or not the Primary Nurse is on duty were evaluated. Reasons for Primary Nurse not being assigned were answered regardless of whether or not the Primary Nurse was on duty the day of the audit and the response was optional. Of the 1,072 opportunities to answer the question during the measurement...
period for selected units of study, there were 834 audits with no response. The remaining 238 free text response types were organized into categories based on whether or not the Primary Nurse was on duty at the time of the audit. Categories were then displayed by frequency based on their nominal scale of measurement (Osborn 2006, 75). Refer to Figures 5 and 6 for a summary of the reasons why a Primary Nurse was not assigned based on if the Primary Nurse was On Duty or Not On Duty at the time of the audit.

There were several reasons that justify the Primary Nurse not being assigned, such as the Primary Nurse serving in another role, an overlap in shift, the Primary Nurse having several Primary Patients at one time, or by the patient’s request. Another finding discovered was the emergence of “pod separation”, meaning that in this facility there are several units that span across two pods (or patient care areas) that are separated by a long hallway. Primary Nurses were not assigned to a Primary Patient if all of their patients were on one pod (in order to avoid the Primary Nurse from caring for patients not in the same physical location). There were several instances where the Primary Nurse had been incorrectly assigned, or due to staffing was not able to serve in a Primary Nurse role.

There were instances where there was no reason listed for why a Primary Nurse had not been assigned.
Figure 5. Reasons why Primary Nurse not Assigned to Patient When Primary Nurse is On Duty

Figure 6. Reasons why Primary Nurse not Assigned to Patient When Primary Nurse is Not On Duty
Additionally, the Outcomes Workgroup wanted to measure the consistency of a patient’s understanding that they have a Primary Nurse and whether or not results of RBC Primary Nurse Audit question “Do you have a Primary Nurse” supported this measure for selected units during the measurement period (see Figure 7). Unit A showed higher percentages upon the initial rollout of Primary Nursing, but declined in percentages throughout the measurement period. Unit B was approaching results above 90% in early 2013, but had dropped to results less than 90% the remainder of the year. Units C and D showed an increase in the percent of time a Patient has identified that they have a Primary Nurse.

Figure 7. Percent of Patients who Identify that they have a Primary Nurse
As audits were conducted, patients were invited to “Name one thing your Primary Nurse has done to make a difference in your care”. 535 anecdotal comments during the measurement period were reviewed for the selected units of analysis. Primary Nurses were described as making a difference in their patient’s care by demonstrating the following themes: Compassion, having Motivated their patients, Comforted them, Communicated effectively, were Action Oriented (and knew when to act), were Advocates on Behalf of the Patient, Met the Needs of the Patient, Took Great Care of the Patient, made a difference simply by having Established the Primary Nurse/Patient Relationship, by Listening, and Educating, all while maintaining Professionalism in their role.

Additionally, a one way ANOVA Test of Variance was calculated to determine if there was a difference between the units in the percent assignment of the Primary Nurse role. The results revealed a statistically significant difference (F=6.709, df = 3, p = .001) showing that the assignment of a Primary Nurse is statistically different across these units of comparison (White 2013, 92-98).

To further understand how the units differ in the assignment of the Primary Nurse role, a Tukey Honest Significant Difference (HSD) test was used to illustrate the difference in means (White 2013, 97). Table 4 describes the mean rate of assigning the Primary Nurse role from June 2012 to November 2013 by unit. Unit C shows a mean assignment rate of 76.3% across all months included in analysis. Unit C is underperforming when compared against Unit A (with a mean of 88.6%), Unit B has a mean of 94.8% (the highest rates of Primary Nurse assignments), and Unit D’s mean assignment is 82.0%.
Further analysis (see Table 5) of the Tukey Honest Significant Difference (HSD) test showed a significant difference between the rate of a Primary Nurse Assignment between Units C and B. By reviewing results in terms of a Multiple Comparison, results can assess for statistical significance and establish relationships among the units of comparison. In summary, Unit B shows a significantly higher rate of assignment of the Primary Nurse role than Unit C.

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit C</td>
<td>Unit A</td>
<td>-12.27</td>
<td>4.09</td>
<td>0.021</td>
</tr>
<tr>
<td>Unit C</td>
<td>Unit B</td>
<td>-18.52</td>
<td>4.45</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 5. Multiple Comparisons of Percent of Patients with Primary Nurse Assignment

Patient Satisfaction

4. What is the difference in results of Press Ganey Associates® Patient Satisfaction questions following the implementation of the Primary Nurse role?

a. Nursing Section: “How well the nurses kept you informed”
b. Overall Assessment Section: “How well staff worked together to care for you”
c. Nursing Section: “Nurses’ attitude toward your requests”
d. **Personal Issues Section:** “Response to concerns/complaints made during your stay?”

e. **Personal Issues Section:** “Staff effort to include you in decisions about your treatment”

f. **Personal Issues Section:** “How well staff explained their roles in your care”

g. ** Visitors and Family Section:** “Staff attitude toward your visitors”

h. **Personal Issues Section:** “Degree to which hospital staff addressed your emotional needs”

To determine if there was a statistically significant difference in Press Ganey Associates® patient satisfaction questions between pre Primary Nurse role implementation on selected units and post Primary Nurse role implementation, a Two Sample t-Test was conducted. Analysis of scores taken as a whole showed no statistically significant differences following implementation of the Primary Nurse role (See Table 6).
<table>
<thead>
<tr>
<th>Section</th>
<th>Press Ganey Associates® Results by Unit and Overall including Means, Standard Deviations, Sample Sizes, and p Value for each Question Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit A</td>
<td>Q4 CY11 – Q1 CY12</td>
</tr>
<tr>
<td>How well the nurses kept you informed</td>
<td>97.4</td>
</tr>
<tr>
<td>Nurses’ attitude towards requests</td>
<td>98</td>
</tr>
<tr>
<td>How well staff worked together to care for you</td>
<td>96.7</td>
</tr>
<tr>
<td>Degree to which hospital staff addressed your emotional needs</td>
<td>94.7</td>
</tr>
<tr>
<td>Staff effort to include you in decisions about your treatment</td>
<td>89.5</td>
</tr>
<tr>
<td>How well staff explained their roles in your care</td>
<td>92.8</td>
</tr>
<tr>
<td>Response to concerns/complaints made during your stay</td>
<td>93.1</td>
</tr>
<tr>
<td>Staff attitude towards your visitors</td>
<td>94.6</td>
</tr>
<tr>
<td>Unit B</td>
<td>Q4 CY11 – Q1 CY12</td>
</tr>
<tr>
<td>How well the nurses kept you informed</td>
<td>90.8</td>
</tr>
<tr>
<td>Nurses’ attitude towards requests</td>
<td>91.7</td>
</tr>
<tr>
<td>How well staff worked together to care for you</td>
<td>92.5</td>
</tr>
<tr>
<td>Degree to which hospital staff addressed your emotional needs</td>
<td>88.8</td>
</tr>
<tr>
<td>Staff effort to include you in decisions about your treatment</td>
<td>88.5</td>
</tr>
<tr>
<td>How well staff explained their roles in your care</td>
<td>89.8</td>
</tr>
<tr>
<td>Response to concerns/complaints made during your stay</td>
<td>87.5</td>
</tr>
<tr>
<td>Staff attitude towards your visitors</td>
<td>93.3</td>
</tr>
<tr>
<td>Unit C</td>
<td>Q4 CY11 – Q1 CY12</td>
</tr>
<tr>
<td>How well the nurses kept you informed</td>
<td>94.1</td>
</tr>
<tr>
<td>Nurses’ attitude towards requests</td>
<td>95.3</td>
</tr>
<tr>
<td>How well staff worked together to care for you</td>
<td>94</td>
</tr>
<tr>
<td>Degree to which hospital staff addressed your emotional needs</td>
<td>90.2</td>
</tr>
<tr>
<td>Staff effort to include you in decisions about your treatment</td>
<td>89.3</td>
</tr>
<tr>
<td>How well staff explained their roles in your care</td>
<td>89.3</td>
</tr>
<tr>
<td>Response to concerns/complaints made during your stay</td>
<td>88.6</td>
</tr>
<tr>
<td>Staff attitude towards your visitors</td>
<td>93.9</td>
</tr>
<tr>
<td>Unit D</td>
<td>Q4 CY11 – Q1 CY12</td>
</tr>
<tr>
<td>How well the nurses kept you informed</td>
<td>92.9</td>
</tr>
<tr>
<td>Nurses’ attitude towards requests</td>
<td>94.2</td>
</tr>
<tr>
<td>How well staff worked together to care for you</td>
<td>93.8</td>
</tr>
<tr>
<td>Degree to which hospital staff addressed your emotional needs</td>
<td>89.8</td>
</tr>
<tr>
<td>Staff effort to include you in decisions about your treatment</td>
<td>90</td>
</tr>
<tr>
<td>How well staff explained their roles in your care</td>
<td>90.9</td>
</tr>
<tr>
<td>Response to concerns/complaints made during your stay</td>
<td>89.4</td>
</tr>
<tr>
<td>Staff attitude towards your visitors</td>
<td>91.8</td>
</tr>
<tr>
<td>TOTAL for Units A, B, C, D Combined</td>
<td>Q4 CY11 – Q1 CY12</td>
</tr>
<tr>
<td>How well the nurses kept you informed</td>
<td>93</td>
</tr>
<tr>
<td>Nurses’ attitude towards requests</td>
<td>94</td>
</tr>
<tr>
<td>How well staff worked together to care for you</td>
<td>93.7</td>
</tr>
<tr>
<td>Degree to which hospital staff addressed your emotional needs</td>
<td>90.1</td>
</tr>
<tr>
<td>Staff effort to include you in decisions about your treatment</td>
<td>89.1</td>
</tr>
<tr>
<td>How well staff explained their roles in your care</td>
<td>90.1</td>
</tr>
<tr>
<td>Response to concerns/complaints made during your stay</td>
<td>88.8</td>
</tr>
<tr>
<td>Staff attitude towards your visitors</td>
<td>93.4</td>
</tr>
</tbody>
</table>

Table 6. Press Ganey Associates® Results by Unit and Overall including Means, Standard Deviations, Sample Sizes, and p Value for each Question Result
Because the rate of assignment of the Primary Nurse role differed among each unit, results of Press Ganey Associates® were also examined by unit to account for variability among units.

A review of results by individual units showed no statistically significant differences by unit except for two questions found in Unit A’s results. Response to the question "Degree to which hospital staff addressed your emotional needs" decreased from a mean of 94.7 to 87.5 (p=0.04) and “Nurses’ attitude towards requests” decreased from 98.0 to 93.8 (p = 0.05) during the measurement period. This question happened to be one of the two additional Press Ganey Associates® measures self-selected by the unit to evaluate Primary Nursing practice. Overall for Unit A all the mean scores slightly decreased following implementation of the Primary Nurse Role (see Table 6).

Of the remaining units, only Unit D showed slight increases in mean scores for six out of eight questions following implementation of the Primary Nurse role (See Table 6).
Chapter 5: Summary, Conclusions and Recommendations

Chapter 5 discusses the summary, conclusions, and recommendations following the analysis of results. Results described the impact of implementation of Primary Nursing on 1) relationship between Primary Nurse implementation and reduction of patient falls and/or pressure ulcer prevalence; 2) unit progress toward reaching performance goals in implementing the Primary Nurse role; and 3) impact of Primary Nursing on Patient Satisfaction.

Pressure Ulcer Prevalence

Following the implementation of the Primary Nurse role, all units reduced their Pressure Ulcer prevalence and overall were able to eliminate Pressure Ulcers during their prevalence study, a finding that was statistically significant. Results show that the introduction of the Primary Nurse role improved this outcome, prevented patient harm and may have had a positive financial impact on the organization eliminating any unnecessary costs incurred due to the avoidance of this Hospital Acquired Condition. According to the Agency for Healthcare Research and Quality’s toolkit for “Preventing Pressure Ulcers in Hospitals”, pressure ulcers can cost anywhere from $20,900 to $151,700 per pressure ulcer and can result in nearly 60,000 patient deaths annually (Berlowitz et al. 2014, 11).
Falls

The implementation of the Primary Nurse role was shown to reduce the Fall Rate, however results were not significant. Similarly, following implementation of the Primary Nurse role, the number of unassisted falls went down while the number of assisted falls went up (all while reducing the total number of falls). While reducing the overall number of falls is important, it is just as important to examine the type of fall; i.e. how best to increase the number of assisted falls while reducing the number of unassisted falls. Unassisted falls pose more danger to the patient therefore by increasing the number of assisted falls, there is reduced risk of patient injury or death. In reducing the number of falls with injury, the Centers for Disease Control and Prevention estimate on average that injuries sustained in a hospital setting cost on average $34,294 per patient (2014). This finding may suggest that the Primary Nurse is more attuned to a patient’s condition and better able to assess a patient’s risk for fall or fall related injury and possibly better able to predict when a patient may be at a high risk. Having established a relationship with the patient, the Primary Nurse may be better able to detect slight changes in patient status, condition, or behavior and in turn immediately act on further fall prevention strategies. The Primary Nurse may have been more proactive in increasing the frequency of rounding to assist patients to and from the bedside. The level of significance perhaps was not established due to the low numbers of falls for the units of comparison for the time periods of study. Sample sizes were too small to establish a comparative analysis across units or overall as totaled results, however these findings suggest the need for further study. Similar to conclusions in reduction of Pressure Ulcer Prevalence, the reduction in
the number of falls and the fall rate suggests potential financial savings for the organization related to avoidance of the unnecessary healthcare costs for patients experiencing injury or complications from a fall.

**Relationship-Based Care (RBC) Primary Nurse Audit Tool**

The patient’s understanding that they have a Primary Nurse showed a trended increase on two of the four units (Units C and D) of comparison based on results of the RBC PN Audit. While the Primary Nurse roles are similar across the units, perhaps the method in which staff were educated on the messaging to patients that they are a Primary Nurse differed in approach.

Results showed that there was in fact a significant difference in the assignment of the Primary Nurse role rate among the units as seen in results of the RBC PN Audit. This result may be masking differences in the quality of care outcome variables considered.

When patients were asked to “Share one thing your Primary Nurse has done to make a difference in your care” one patient on Unit C shared “individualized care – I wish all hospitals were this way”. A patient on Unit B shared that their Primary Nurse “made a difference in my life, sat with me while I cried”. Unit D had patients comment that “it helps to have the same nurse”; that their Primary Nurse “explained what is going on and what will happen”; and “I can tell her things I wouldn’t tell someone I just met”. Unit D also had a patient share that their Primary Nurse “remembered all my kids names and asked about them”. Unit A had one patient state that their Primary Nurse “Advocates my needs with the doctors” and another patient stated that their Primary Nurse “makes me smile – even the days I don’t feel like it”. These comments represent a small number of
the hundreds of comments that described how having Primary Nurse made a difference in a patient’s care in their own words.

**Patient Satisfaction**

There was no significant improvement in results of Press Ganey Associates® Satisfaction questions following implementation of Primary Nursing, however there was an observed incremental increase in the “Response to concerns/complaints made during your stay”. The Primary Nurse, having established a relationship with their patients under the framework of Relationship-Based Care, may have encouraged patients to be more comfortable expressing their concerns and complaints during their stay. This finding may be a result of the RBC Primary Nurse audit where feedback from the patients are requested, therefore giving the patients opportunity to share any concerns that could be acted upon real-time.

Unit D improved their Primary Nursing Audit results in regard to the patient identifying that they have a primary nurse. Perhaps that impacted results of Press Ganey Associates® scores for this unit. Additionally, Unit D showed a lower rate of assignment and inconsistency in the assignment of the Primary Nurse towards the beginning of the measurement period, but following implementation of Primary Nursing results continued to improve and showed the largest increase in assignment of the Primary Nurse role in comparison to the other units. It is likely that as more Primary Nurses were assigned, many of their patients then understood the role of the Primary Nurse in their care, which in turn could have impacted their response to Press Ganey Associates® patient satisfaction questionnaires. While results were not statistically significant, Unit D
improved their results in six out of eight survey questions used in the analysis with the largest improvement shown in the *Visitors and Family* question “Staff attitude towards your visitors”. Unit D has a longer ALOS and may be most sensitive to accommodating visitors and family for their patients who may be awaiting or receiving care following a Bone Marrow Transplantation. These patients may or may not be on contact isolation due to their immunocompromised state and benefit the most from visitors due to their restrictions from leaving the unit. The increased ALOS also creates a greater opportunity to establish a relationship with their Primary Nurse and perhaps it is that extended relationship with their Primary Nurse that resulted in an increase in Press Ganey Associates® scores in six out of eight areas.

Other areas for improvement for Unit D were seen in patient satisfaction criteria evaluating if the staff included patients in decisions or treatments, that patients understood staff’s roles in care, evaluating nurse’s attitude towards requests, how well nurses kept their patient informed, and how well staff worked together to care for the patient. Due to the environment of this unit, its disease-specific nature along with the longer ALOS, it is possible that the patient was able to observe more of a team-based approach to care and in turn was more informed about their continuum of care. It is unclear why results did not increase in response to “Response to concerns/complaints made during your stay” or “Degree to which hospital staff addressed your emotional needs” as we would expect to see these scores improve. With the ALOS it could have been possible that patients were more sensitive to these two survey items. While the decrease in these two questions were not a significant, Unit D could benefit from
focusing on improving emotional needs and responding to patient concerns and complaints.

Unit B, a post-surgical, short stay unit, was able to improve results of “Staff effort to include you in decisions about your treatment”. It is possible that staff on this unit were more attuned and alert in their communication with patients following surgery in effort to include them in decisions about their care, especially due to their shorter ALOS and urgency in establishing the Primary Nurse relationship. This could be related to preparing patients for discharge or admission to another inpatient unit or educating the patients on what was to be expected following surgery. Unit B also improved results to “Response to concerns/complaints made during your stay” which could also be impacted by their stay on a post-surgical unit and the staff sensitivity to identifying any post-surgical complications. On the contrary, it could have been their shorter ALOS that got in the way of patients responding to other Press Ganey Associates® questions due to limited timeframe to further establish a relationship with their Primary Nurse, however Unit B was shown to be more consistent in their assignment of the Primary Nurse role per results of the Relationship-Based Care Primary Nurse Audit and showed a statistical difference in their rate of assignment in comparison to Unit C.

Unit C showed an observed incremental increase in one question, “Response to concerns/complaints made during your stay” following implementation of the Primary Nurse role. This unit also has a shorter ALOS which may be the cause for increasing results in this area due to a shorter window and opportunity for the Primary Nurse to respond to any patient concerns/complaints. While the unit’s rate of Primary Nurse
assignment per the audit also shows a slow increase over time, their rate of assignment is statistically different than Unit B, whereas Unit B improved results in two Press Ganey Associates® questions as opposed to just one question for Unit C. On the other hand, Unit C was able to show an increase in the percent of time a patient identified that they had a Primary Nurse according to results of the RBC PN Audit. It is unclear why Unit C did not improve results of Press Ganey Associates® in other areas used to evaluate Primary Nursing. Unit C could benefit from further study to determine if other confounding factors could have influenced results during the timeframe of measurement.

For the units that struggled to show improvement in results of their Press Ganey Associates® scores, it was found that there was not enough consistency in assignment of the primary Nurse role. This could have gotten in the way of seeing a statistical impact in Press Ganey Associates® results following the implementation of the Primary Nurse role. There was a reduction in the rate of the Primary Nurse assignment in March, a month where possible spring break vacations could have impacted observed results. Similarly, November also shows a downward trend in results in both 2012 and 2013 that could also be in alignment with the holiday and increased time off for staff as well as staff working different schedules. Results of Press Ganey Associates® patient satisfaction were also subject to the ceiling effect where results could not approach levels above 100%, therefore large increases in improvement were not possible. The group of patients that was surveyed by Press Ganey Associates® and received a questionnaire upon discharge was likely not the same group of patients surveyed following implementation of Primary Nursing. This makes results difficult to capture due to different populations in the result.
Unit A’s response to the questions “Degree to which hospital staff addressed your emotional needs” and “Nurses’ attitude towards requests” showed a significant decrease in results following the implementation of the Primary Nurse role. This finding is inconsistent with what would be expected from a unit with a longer ALOS. It was thought that a unit with a longer ALOS would have a greater opportunity to establish relationship between the patient and their Primary Nurse. Maklebust and Suchy (2007) describe how evidence of success can be seen in “improved satisfaction with nursing care according to Press Ganey Associates® scores” which was inconsistent with findings. Unit A did show an inconsistency in their rate of assignment of a Primary Nurse role, which could be a factor resulting in no observed incremental increases in any of the Press Ganey Associates® survey results. Further study may be of benefit to this unit in order to understand why no changes occurred during the time period under study. The unit could also benefit from working toward a more consistent rate of assigning the Primary Nurse as made evident upon review of results of the RBC PN audits.

Conclusions

While this study did not explore how staffing could impact Primary Nursing, the process of assigning a primary nurse could be considered during planning for staffing and possibly translate in results of analysis where a reduced incidence of pressure ulcers was discovered (Houser et al. 2012, 380).

In terms of the RBC Primary Nurse Audits, results may be top of the range in their scores above 70% in many areas. This is consistent with Ryan and Logue, who suggest that with average scores of 65 for many elements of an audit evaluating Primary
Nursing, that anything over 70 is reasonable enough to consider top of the range and scores above 80 as high (Ryan et al. 1998, 420). To illustrate, all units of comparison showed a mean assignment of the Primary Nurse role above 70% which may suggest superior performance in the rate of assigning a Primary Nurse. It may also suggest that there be room for improvement among the units performing below 70% for audit criteria used to evaluate the Percent of Patients with a Primary Nurse.

A patient satisfaction instrument used by Sellick, Russel, and Beckman (2003, 550) developed for the purpose of their study to evaluate Primary Nursing contained ten items directly related to patients’ perception of nursing care they received and were able to show six items yielded a statistically significant difference in favor of primary nursing among the experimental and control units. However, they did point out the study could have benefited from a standardized instrument that was subject to validly and reliability checks.

Findings were also consistent with the results of Thomas and Bond (1991, 293) that despite patient satisfaction being one of the most widely measured outcomes to evaluate nursing care, the majority of studies found no significant difference in patient satisfaction among units operating under a Primary Nursing delivery model versus those under another organizational structure.

Findings were consistent with regard to the research done by Fairbanks, in which measures were described as difficult to capture due to the ever changing landscape of the hospital setting. Specific examples such as changes in staff members, changes in patients, lack of randomization, and other confounding factors can influence quality of nursing
care and could have impacted results (Fairbanks 1981, 53). This very well could have been a factor in identifying measures to be included in the analysis.

Findings were inconsistent as described in JoAnn Maklebust and Susanne Suchy’s article “Implementing Relationship-Based Care in a Comprehensive Cancer Center”, where evidence of success in implementation of Relationship-Based Care can be seen in “improved satisfaction with nursing care according to Press Ganey Associates® scores” (2007). However, their work did not cite results of Press Ganey Associates® following implementation of the Primary Nurse role and future studies could impact conclusions.

**Implications of Study**

There are few studies that describe what the results of a Primary Nurse Audit should conclude (Ryan et al. 1998, 420). The results of this study could benefit others in creating an audit in order to evaluate the Primary Nurse role, but also agree with Ryan et al. that measuring Primary Nursing is difficult and can differ across organizations, especially in the process of assigning the Primary Nurse role. As stated in Fairbank’s work, the difficulty of choosing measures that are not impacted by changes in staff members, patients, lack of randomization, and other confounding factors is also an important consideration when evaluating appropriate outcomes to evaluate the Primary Nurse Role.

**Recommendations**

Based on study results, it is recommended that the list of outcome measures be expanded to include other baseline measures in the adoption and future rollout of the RBC Primary Nursing framework. This study explored a small subset of inpatient units in
an oncology setting. Future research evaluating all units across the organization could benefit the field of study. Further research is needed to explore how Primary Nursing can be established in an ambulatory care delivery setting. Future studies should aim to randomize patient populations and choose measures that are at a lower risk for confounding factors. While randomization could benefit the field of study, this organization will continue to introduce the role of the Primary Nurse to all patients under the RBC Primary Nurse model. Further, randomization in the case of a Fall or Pressure Ulcer is not possible and similar outcomes can only serve as observational outcomes.

Press Ganey Associates® patient satisfaction is a widely used outcome measure to assess a patient’s perception of care, however there were few studies evaluating results of Press Ganey Associates® as an outcome to measure the implementation of Primary Nursing. Similar to findings made by Thomas and Bond (1991, 294-295), it was also discovered in this study that many organizations have evaluated Primary Nursing activities through the use of their own institutionally developed instruments and questionnaires, thus making generalizability of the studies difficult. To assess patient satisfaction as an outcome to measure Primary Nursing it is recommended that organizations choose outcome measures that can be replicated across organizations.

Outcome measures such as falls and pressure ulcers could have low numbers for a selected pre and post measurement or treatment period. For future study, expanding the timeframe of analysis could help impact statistical power and better represent changes following introduction of the Primary Nurse role.
Internally, the organization is looking into better marrying outcome measures into a single source for displaying data in the form of a scorecard through use of several electronic results using Statit piMD, a Performance Indicator and Management Dashboard (Midas+ Statit™ Solutions Group 2012). This provides another means for real-time information in order to access, track, analyze, and compare results across units and to help identify best practices. This data viewing platform allows for drill-down process measure information from overall inpatient scorecards down to the unit level and current efforts are underway to make this platform more widely utilized and available to staff.
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Appendix A: Relationship-Based Care (RBC) Primary Nurse Audit Tool

Unit: ___________________________ RBC Wave #: ___________________________

Date of Audit: ___________________________ Completed By: ___________________________

Instructions:
- **Part I – Choose ONE DAY each month and complete for:**
  - 100% of Inpatient Current Unit Census
  - 100% of Ambulatory Clinic Visits for the day
- **Part II – Only Complete for patients with a Primary Nurse (PN) Assignment**
  - Inpatient Units complete for 100% of patients with PN
  - Ambulatory Clinics complete for 30 patients with PN
- The completed tool should be faxed (293-6972) or emailed to Kristen.Johnson2@osumc.edu in the James Quality & Patient Safety Department by no later than the 5th day of the following month.

I. **Unit Summary:**
- List the services where RBC/PN has been rolled out on your unit:

| __________________________________________________________________________ |
| __________________________________________________________________________ |
- For Ambulatory Clinics: List the disease-specific services in clinic today:

| __________________________________________________________________________ |
| __________________________________________________________________________ |

Fill in number for each question below:

- # of Patients on Current Unit Census/Scheduled for Clinic: ________
- # of Patients With PN Assignment: ________
- # of Patients Without PN Assignment: ________

**Reason for Patients without PN Assignment:**

- # Patients not part of initial Rollout of PN: ________
- # New Patients – only include <24 hr (inpt) and/or initial ambulatory visit
  - Obs and 23-hr patients not included here: ________
- # Off Service: ________
- # No Reason/Other (explain below): ________
II. Patient Specific: (COMPLETE FOR ALL PATIENTS WITH ASSIGNED PN)

A. Obtain Patient Name, MRN and PN name info from assignment sheet or Charge Nurse Report.
B. Complete the Process/Documentation section (Questions #1-5).
C. Complete the Patient and/or Family Interview section (Questions #1-3).

<table>
<thead>
<tr>
<th>Patient Label (or Name &amp; MRN):</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room # (optional):</td>
<td>Patient</td>
<td>Patient</td>
<td>Patient</td>
</tr>
<tr>
<td>Assigned PN Name:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Process/Documentation Section

1. Name of PN/Team is listed on Assignment Sheet or Charge Nurse Report.

<table>
<thead>
<tr>
<th>#1: Name of PN/Team is listed on Assignment Sheet or Charge Nurse Report.</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

2. Is the PN on duty today?

<table>
<thead>
<tr>
<th>#2: Is the PN on duty today?</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

• If Yes, is PN assigned to primary patient?

<table>
<thead>
<tr>
<th>• If Yes, is PN assigned to primary patient?</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

• If No – reason PN, not assigned?

<table>
<thead>
<tr>
<th>• If No – reason PN, not assigned?</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

3. Name of PN/Team documented in the EMR.

<table>
<thead>
<tr>
<th>#3: Name of PN/Team documented in the EMR.</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

4. PN/Team made note/update in the EMR during the past 48 hrs (or 24 hour note for Obx/Short Stay).

<table>
<thead>
<tr>
<th>#4: PN/Team made note/update in the EMR during the past 48 hrs (or 24 hour note for Obx/Short Stay).</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

5. Name of PN/Team posted in patient room.

<table>
<thead>
<tr>
<th>#5: Name of PN/Team posted in patient room.</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

C. Patient/Family Interview Section

1. Do you have a Primary Nurse?

<table>
<thead>
<tr>
<th>#1: Do you have a Primary Nurse?</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

• If Yes – who is your PN? (List name)

<table>
<thead>
<tr>
<th>• If Yes – who is your PN? (List name)</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

2. (PI Perception) Has your PN/Team taken care of you the last 24 hrs/seen you during this visit?

<table>
<thead>
<tr>
<th>#2: (PI Perception) Has your PN/Team taken care of you the last 24 hrs/seen you during this visit?</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

3. Name 1 thing your PN has done to make a difference in your care?

<table>
<thead>
<tr>
<th>#3: Name 1 thing your PN has done to make a difference in your care?</th>
<th>Patient</th>
<th>Patient</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Appendix B: Press Ganey Associates® Patient Questionnaire

SURVEY INSTRUCTIONS: You should only fill out this survey if you were the patient during the hospital stay named in the cover letter. Do not fill out this survey if you were not the patient. Answer all the questions by completely filling in the circle to the left of your answer. You are sometimes told to skip over some questions in this survey. When this happens you will see an arrow with a note that tells you what question to answer next, like this: Yes / No → If No, Go to Question 1

Please answer the questions in this survey about your stay at James Cancer Center. Do not include any other hospital stays in your answers.

YOUR CARE FROM NURSES
1. During this hospital stay, how often did nurses treat you with courtesy and respect?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

2. During this hospital stay, how often did nurses listen carefully to you?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

3. During this hospital stay, how often did nurses explain things in a way you could understand?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

4. During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always
   ○ I never pressed the call button

YOUR CARE FROM DOCTORS
5. During this hospital stay, how often did doctors treat you with courtesy and respect?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

6. During this hospital stay, how often did doctors listen carefully to you?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

7. During this hospital stay, how often did doctors explain things in a way you could understand?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

THE HOSPITAL ENVIRONMENT
8. During this hospital stay, how often were your room and bathroom kept clean?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

9. During this hospital stay, how often was the area around your room quiet at night?
   ○ Never
   ○ Sometimes
   ○ Usually
   ○ Always

YOUR EXPERIENCES IN THIS HOSPITAL
10. During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?
    ○ Yes
    ○ No → If No, Go to Question 12

11. How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?
    ○ Never
    ○ Sometimes
    ○ Usually
    ○ Always

12. During this hospital stay, did you need medicine for pain?
    ○ Yes
    ○ No → If No, Go to Question 15

continued...
13. During this hospital stay, how often was your pain well controlled?  
   - Never  
   - Sometimes  
   - Usually  
   - Always  

14. During this hospital stay, how often did the hospital staff do everything they could to help you with your pain?  
   - Never  
   - Sometimes  
   - Usually  
   - Always  

15. During this hospital stay, were you given any medicine that you had not taken before?  
   - Yes  
   - No  

16. Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?  
   - Never  
   - Sometimes  
   - Usually  
   - Always  

17. Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?  
   - Never  
   - Sometimes  
   - Usually  
   - Always  

18. After you left the hospital, did you go directly to your own home, to someone else’s home, or to another health facility?  
   - Own home  
   - Someone else’s home  
   - Another health facility  
   - If another, go to Question 21  

19. 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  
   - No  

20. During this hospital stay, did you get information in writing about what symptoms or health problems to look out for after you left the hospital?  
   - Yes  
   - No  

22. Would you recommend this hospital to your friends and family?  
   - Definitely no  
   - Probably no  
   - Probably yes  
   - Definitely yes  

23. During this hospital stay, staff took my preferences and those of my family or caregivers into account in deciding what my health care needs would be when I left.  
   - Strongly disagree  
   - Disagree  
   - Agree  
   - Strongly agree  

24. When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.  
   - Strongly disagree  
   - Disagree  
   - Agree  
   - Strongly agree  

25. When I left the hospital, I clearly understood the purpose for taking each of my medications.  
   - Strongly disagree  
   - Disagree  
   - Agree  
   - Strongly agree  

26. During this hospital stay, were you admitted to this hospital through the Emergency Room?  
   - Yes  
   - No  

27. In general, how would you rate your overall health?  
   - Excellent  
   - Very good  
   - Good  
   - Fair  
   - Poor  

28. In general, how would you rate your overall emotional health?  
   - Excellent  
   - Very good  
   - Good  
   - Fair  
   - Poor  

29. What is the highest grade or level of school that you have completed?  
   - 8th grade or less  
   - Some high school, but did not graduate  
   - High school graduate or GED  
   - Some college or 2-year degree  
   - 4-year college graduate  
   - More than 4-year college degree  

30. Are you of Spanish, Hispanic or Latino origin or descent?  
   - Yes, Puerto Rican  
   - Yes, Mexican, Mexican American, Chicano  
   - Yes, Cuban  
   - Yes, other Spanish/Hispanic/Latino  

31. What is your race? Please choose one or more.  
   - White  
   - Black or African American  
   - Asian  
   - Native Hawaiian or other Pacific Islander  
   - American Indian or Alaska Native  

32. What language do you mainly speak at home?  
   - English  
   - Spanish  
   - Chinese  
   - Russian  
   - Vietnamese  
   - Some other language (please print):  

ADDITIONAL QUESTIONS ABOUT YOUR STAY  
Now that we have asked you to tell us about what happened during your stay, we want to ask you about how well we met your needs.  
INSTRUCTIONS: Fill in the circle that best describes your experience. If a question does not apply to you, please skip to the next question. Space is provided for you to comment on your experiences.  

BACKGROUND QUESTIONS  
1. Patient’s first stay here:  
   - Yes  
   - No  

2. Was your admission unexpected?  
   - Yes  
   - No  

3. Admitted through the Emergency Department:  
   - Yes  
   - No  

4. Are you currently involved in a clinical trial?  
   - Yes  
   - No  

ADMISSION  
1. Speed of admission process  
   - Very poor  
   - Poor  
   - Fair  
   - Good  
   - Very good  

2. Courtesy of the person who admitted you:  
   - Very bad  
   - Bad  
   - Fair  
   - Good  
   - Very good  

Comments (describe good or bad experience):  

123456789

SAMPLE
### ROOM
1. Pleasantness of room decor ................................................................. 0 0 0 0 0
2. Room cleanliness ................................................................................... 0 0 0 0 0
3. Courtesy of the person who cleaned your room .................................... 0 0 0 0 0
4. Room temperature .................................................................................. 0 0 0 0 0
5. Noise level in and around room ........................................................... 0 0 0 0 0

**Comments** (describe good or bad experience):

### MEALS
1. Temperature of the food (cold foods cold, hot foods hot) ................. 0 0 0 0 0
2. Quality of the food .................................................................................. 0 0 0 0 0
3. Courtesy of the person who served your food .................................... 0 0 0 0 0

**Comments** (describe good or bad experience):

### NURSES
1. Friendliness/courtesy of the nurses .................................................... 0 0 0 0 0
2. Promptness in responding to the call button ...................................... 0 0 0 0 0
3. Nurses’ attitude toward your requests .................................................. 0 0 0 0 0
4. Amount of attention paid to your special or personal needs ............ 0 0 0 0 0
5. How well the nurses kept you informed .............................................. 0 0 0 0 0
6. Skill of the nurses ................................................................................... 0 0 0 0 0

**Comments** (describe good or bad experience):

### TESTS AND TREATMENTS
1. Waiting time for tests or treatments .................................................. 0 0 0 0 0
2. Explanations about what would happen during tests or treatments .... 0 0 0 0 0
3. Courtesy of the person who took your blood ...................................... 0 0 0 0 0
4. Courtesy of the person who started the IV ........................................ 0 0 0 0 0

**Comments** (describe good or bad experience):

### VISITORS AND FAMILY
1. Accommodations and comfort for visitors ....................................... 0 0 0 0 0
2. Staff attitude toward your visitors ....................................................... 0 0 0 0 0

**Comments** (describe good or bad experience):

continued...
### PHYSICIAN WHO WAS THE PHYSICIAN YOU SAW?

<table>
<thead>
<tr>
<th></th>
<th>very poor</th>
<th>poor</th>
<th>fair</th>
<th>good</th>
<th>very good</th>
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</thead>
<tbody>
<tr>
<td>1. Time physician spent with you</td>
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<td>2. Physician's concern for your questions and worries</td>
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<td>3. How well physician kept you informed</td>
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<tr>
<td>4. Friendliness/courtesy of physician</td>
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<td>5. Skill of physician</td>
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**Comments (describe good or bad experience):**

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### DISCHARGE

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<th>fair</th>
<th>good</th>
<th>very good</th>
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</thead>
<tbody>
<tr>
<td>1. Extent to which you felt ready to be discharged</td>
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<tr>
<td>2. Speed of discharge process after you were told you could go home</td>
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<tr>
<td>3. Instructions given about how to care for yourself at home</td>
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**Comments (describe good or bad experience):**

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### PERSONAL ISSUES

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<th>fair</th>
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<th>very good</th>
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<tbody>
<tr>
<td>1. Staff concern for your privacy</td>
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<td>2. How well your pain was controlled</td>
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<tr>
<td>3. Degree to which hospital staff addressed your emotional needs</td>
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<td>4. Response to concerns/complaints made during your stay</td>
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<td>5. Staff effort to include you in decisions about your treatment</td>
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<td>6. Degree to which hospital staff addressed your spiritual needs</td>
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<td>7. How well staff explained their roles in your care</td>
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<td>8. Degree to which you and your family were able to participate in decisions about your care</td>
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<td>9. Staff sensitivity to the inconvenience that health problems and hospitalization can cause</td>
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**Comments (describe good or bad experience):**

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### OVERALL ASSESSMENT

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<th>poor</th>
<th>fair</th>
<th>good</th>
<th>very good</th>
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</thead>
<tbody>
<tr>
<td>1. How well staff worked together to care for you</td>
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<tr>
<td>2. Likelihood of your recommending this hospital to others</td>
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<tr>
<td>3. Overall rating of care given at hospital</td>
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**Comments (describe good or bad experience):**

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Patient's Name: ____________________________

Telephone Number: ____________________________

THANK YOU. Please return the completed survey in the postage-paid envelope.