TO: Joint Committee on Quality Care

FROM: Cindy Boily, MSN, RN, NEA-BC
Senior VP & CNO

DATE: May 5, 2015

SUBJECT: Executive Summary
Leapfrog Hospital Survey and Evidence for 2014 Standards:
Nursing Staff Services and Nursing Leadership

Institute Of Medicine, Research Findings (pg.11), and WakeMed

The number of patients a Registered Nurse (RN) cares for can directly and indirectly impact patient safety during their hospitalization. “Safety” in this case refers to infection rates, patient falls, hospital-acquired pressure ulcers, and even death. Multiple studies using different methodology and from a variety of disciplines consistently show associations between adequate RN staffing and lower hospital related morbidity, mortality and adverse patient events. RN staffing levels for postsurgical patients have been shown to have an inverse relationship with urinary tract infections, pneumonia, thrombosis and pulmonary compromise; in medical patients, higher nurse patient ratios translated into a reduction in gastrointestinal bleeding, shortened length of stay, and lower rates of ‘failure to rescue’. Failure to rescue is the term used when early warning signs of upper gastrointestinal bleeding, sepsis, deep venous thrombosis, shock or cardiac arrest are not detected and acted upon.

The evidence and impact about nurse staffing was expanded on when in 2010 a landmark two year collaborative between the Institute of Medicine and the Robert Wood Johnson Foundation concluded, producing “The Future of Nursing: Leading Change, Advancing Health.” Chaired by former Secretary of Health and Human Services, Donna Shalala, and populated by leaders from practice, academia, business, and health policy, the report made eight recommendations to assure that nurses were available and equipped to address the healthcare needs of the future. Soon after its release in April 2011, leaders from across North Carolina convened a Summit to identify key priorities for our state. The four recommendations prioritized for North Carolina were:

- Remove barriers to practice: Nurses should be able to practice to the full extent of their education and training
- Expand opportunities for nurses to lead: Nurses should be full partners with physicians and other health care professionals in redesigning health care in the United States
- Increase the proportion of RNs with a Bachelor of Science in Nursing to 80% by 2020
- Build an infrastructure that collects and analyzes interprofessional health care workforce data

WakeMed was engaged in these discussions in 2011 and has been making strategic decisions internally to achieve an outstanding nursing workforce in both numbers and quality.
**Magnet Designation**
Magnet designation represents excellence in nursing care and quality with multiple studies that link superior patient outcomes with this prestigious organizational designation. Magnet hospitals are associated with higher percentages of nurses with BSN or higher degrees as well as specialty certifications, both of which correlate with lower mortality and failure to rescue rates. Magnet hospitals have better nursing work environments with a nursing workforce that is 18% less likely to be dissatisfied and 13% less likely to have high levels of burnout. Magnet standards provide a foundation for excellence.

**Leapfrog Hospital Survey**
The Leapfrog Survey is completed voluntarily by hospitals across the country. Three areas are assessed which include patient outcomes, resources used in caring for patients, and leadership structures that promote patient safety. Results are available to the public via the Leapfrog website.

One of the Leapfrog standards speaks to the efforts by the organization to ensure adequate and competent nursing staff and nursing leadership at all levels. The very first question for this standard asks if the hospital is recognized as a Magnet facility. If so, full credit is received for this safe practice.

Given WakeMed is not currently designated Magnet, this document addresses the Leapfrog standards with examples of evidence for nursing staff services and nursing leadership requiring a report to senior administration and the Board of Directors.
9.1 Awareness to ensure adequate and competent nursing staff service and nursing leadership at all levels

In regard to ensuring adequate and competent nursing staff service and nursing leadership at all levels, our organization has done the following or has had the following in place within the last 12 months:

- a. held at least one educational meeting for clinicians, senior management, mid-level management, and line management specifically related to the areas of patient safety and adequate nurse staffing effectiveness. (p.155)
- b. performed a risk assessment and an evaluation of the frequency and severity of adverse events that can be related to nurse staffing. (p.155)
- c. submitted a report to the Board (governance) with recommendations for measurable improvement targets. (p.155)
- d. collected and analyzed data of actual unit-specific nurse staffing levels on a quarterly basis to identify and address potential patient safety-related staffing issues. (p.155)
- e. provided unit-specific reports of potential patient safety-related staffing issues to senior administrative leadership and the Board (governance) at least quarterly. (p.155)

9.1e: Quarterly reports to the Board were not achieved in 2014.

Examples of Evidence for 9.1:

1. **Educational Meeting**: Monthly, nursing quality dashboards, journal articles, and clinical discussions are presented at System Nursing Leadership, Nursing Executive Council, Clinical Nurse Council, Nurse Manager Council, and Nursing Staff Quality Improvement and Peer Review Committee meetings. RN staffing and nurse sensitive clinical indicator data presented by the National Database for Nursing Quality Indicators (NDNQI) are examined by the nursing team and leadership to address expectations and develop action plans where opportunities for improvement exist. Additionally, education is provided on evidence and resources supporting practice change.

2. **Budget Preparation**: For inpatient units Fiscal Year (FY) 2014 budget, the CNO, respective Vice President, Director of Nursing Operations, nursing director, and nursing manager met to review existing staffing plans, develop a standard staffing template and transparently display and review direct nursing hours per unit of service, worked hours per unit of service, and paid hours per unit of service. The nursing team analyzed staffing patterns for adequacy in meeting patient needs based on populations served, acuity, monitoring requirements, assessment/reassessment standards, and unit performance on clinical indicators.

3. **National Database for Nursing Quality Indicators (NDNQI)**: This is the database used to measure WakeMed nurse-sensitive indicator results against >2000 U.S. hospitals. Measures reported include Falls, Restraints, Hospital Acquired Pressure Ulcers, and Nursing Hours per Patient Day. This allows correlation of nursing hours per patient day for all inpatient units to adverse events that may occur. An example is provided in Appendix A on page 12.

4. **Behavioral Health Response Plan**: A robust Behavioral Health Response Plan has been established to support staff and patients for the growing number of behavioral health
patients seeking care. When patients are medically stabilized, up to 11 patients may be cohorted in a specially designed unit (1D) to promote patient and staff safety while patients await placement at behavioral health specialized facilities. For patients who require medical treatment, whenever possible they are placed on designated nursing units. Nurses working on these units have received special training (non-crisis intervention) and are adept at various communication techniques and strategies. However, should a patient escalate the Behavioral Health Response Team (BHRT) responds to assist unit staff. This specialized team consists of a Clinical Nurse Specialist, mental health technician, a behavioral counselor, Campus Police and the Clinical Administrator. After the BHRT incident, staff is able to debrief. WakeMed also offers additional resources to help staff cope with work place violence.

5. **Epic Planning:** In June 2014, the CNO, Director of Staffing Resources, and Director of Nursing Operations met to review the additional RN staff needed for Epic training and support. It was determined that a minimum of 70 supplemental RNs would be needed to support Epic training and go-live plan.

6. **Labor and Delivery Planning:** Construction is underway for renovation of the Labor and Delivery unit on Raleigh Campus to include a specialized Antepartum unit. Plans for the staffing model for this high risk service began in July 2014.
9.2 Accountability to ensure adequate and competent nursing staff service and nursing leadership at all levels

In regard to ensuring adequate and competent nursing staff service and nursing leadership at all levels, our organization has done the following or has had the following in place within the last 12 months:

a. held departmental/clinical leadership directly accountable for improvements in performance through performance reviews or compensation. (p. 155)

b. included senior nursing leadership as part of the hospital senior management team. (p. 155)

c. reported performance metrics related to this area to the Board (governance). (p. 155)

d. held the Board (governance) and senior administrative leadership accountable for reducing patient safety risks related to nurse staffing decisions. (p. 155)

e. held the Board (governance) and senior administrative leadership accountable for the provision of financial resources for nursing services. (p. 155)

f. responded to the Board (governance) the results of the measurable improvement targets. (p. 155)

Examples of Evidence for 9.2:

1. **Shift Wizard**: Shift Wizard is a real-time scheduling and productivity system used by nursing services to monitor and manage staffing based on patient needs, census, and complexity of care. Unit-based Charge Nurses respond to changes in these variables to ensure adequate RN resources are available, as well as document any variance to the budget. Shift Wizard productivity was added to the inpatient unit bi-weekly budget reports to demonstrate the correlation between staffing plans and budget targets. Nurse leaders monitor and manage this process which is aligned with monthly budget performance.

   **Shift Wizard example for Neonatal ICU demonstrating budget variance**

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**Staffing Worksheet for Raleigh WPI: Neonatal ICU**
2. **Job Descriptions and Performance Review:** The job description for all clinical RNs was standardized with input from every level of nursing and subsequently approved by the Nursing Executive Council. In 2014, a nursing project team reviewed then standardized the clinical nurse performance review integrating the Nursing Professional Practice Model: Compassion, Advocacy, Relationships, Excellence, Safety (CARES). Performance review by peers using the CARES model was implemented in August 2014.

3. **Quality Nursing Dashboard:** Raleigh, Cary, and System Nursing Dashboards help nursing monitor key nurse-sensitive indicators, RN turnover, and outcomes that are aligned with organizational priorities. See Appendix B for the System Nursing Dashboard on page 13.

4. **New RN Graduate Retention Report**
   RN retention is vital to maintaining competent and experienced nursing staff. WakeMed Nursing has a track record of outperforming the national benchmark for new RN graduate retention at one year. See Appendix C for new RN graduate retention data on page 14.

5. **Annual Nursing Update by Chief Nursing Officer to the Board of Directors:** This was presented on October 7, 2014, and included the nursing dashboard, performance matrix for nurse-sensitive outcomes, and patient experience data.
9.3 Ability to ensure adequate and competent nursing staff service and nursing leadership at all levels

Examples of Evidence for 9.3:

1. Nurse Practice Communication and Education: Communication of vital information regarding evidence-based, safe nursing practice was standardized in 2014 through the use of Practice Alerts, Practice Advisories, and Education Packets. All nursing areas are included in these communications. See Appendix D on page 15 for an example of a Nursing Practice Alert.

2. Annual Competency Evaluations: Each year clinical staff including RNs, Nurse Aides, and Technicians must demonstrate that they have the knowledge and skills to perform high risk, low volume procedures and skills. Their competence is validated by nurse experts and documented in individual employee files.

3. Patient Flow Impacts Patient Safety: An interdisciplinary team was established to improve patient flow throughout the WakeMed system. Numerous opportunities were identified and multiple work processes implemented to ensure timely, safe patient flow. Examples of new processes include proactive bed assignments, identifying surge space on each unit, plans for patient discharge expedited within one hour, and ED staff supplemented with additional RNs who care for patients waiting for admission. In Fall 2014, the Raleigh Adult ED implemented a program for deploying a physician in Triage to improve door to doc time, positively impacting patient care and ED crowding. Nursing redesigned their staffing model and work processes to support this safe practice.

4. Neonatal Intensive Care Unit (NICU) Supplemental Staffing: In February 2014, the newly designed NICU opened resulting in increased census requiring the need for additional RNs. The Staffing Resources Department worked with the NICU management team to provide these highly specialized RNs ensuring patient care needs were met.
5. **Allocated RN Resources for Safety - Catheter Associated Urinary Tract Infections (CAUTI) Initiative:** During 2014, in conjunction with our catheter vendor, a system assessment of catheter care was conducted. RNs and Nurse Aides were provided intensive, dedicated time to review and practice the critical components of safe catheter care.

6. **Allocated Constant Observer (Sitter) Resources for Safety:** We continue to provide constant observers to ensure a safe environment for behavioral health patients, patients with other safety issues, and our staff.

7. **Approval of 2014 Budget:** The 2014 Budget included all nurse staffing plans with targets and was approved by the Board of Directors.
9.4 Action to ensure adequate and competent nursing staff service and nursing leadership at all levels

Examples of Evidence for 9.4:

1. **Staffing Reallocation Plan**: The Staffing Reallocation policy was revised to ensure a consistent system-wide approach that correlates patient census and patient care needs with RN competencies and availability. The newly standardized process may include reallocating RNs from their home unit to another like unit to provide needed patient care. The policy was reviewed and vetted by nurses at all levels of the organization. A standard icon was created in Shift Wizard (scheduling and productivity system) to easily identity RNs who sign-up for additional shifts to support patient care needs. This allows the nursing division to utilize the most cost-effective staffing resources at the appropriate time for the specific patients requiring care. The Clinical Administrators work collaboratively with the Staffing Resources Office and nursing leadership to reallocate and/or flex RN staff matching patient census with patient care needs and the specialty RNs needed to provide care.

2. **Scope of Service**: This is required for every area where nursing care is provided and defines adequate staffing levels.

3. **Self-Scheduling Policy**: Implementation of a standard Staffing and Scheduling policy began in September 2014 for the nursing division. Although most units had already engaged RN staff with self-scheduling, the policy aligned practices and standardized attendance and occurrence relief for all nursing units while providing clinical nurses a voice in their schedules.

4. **Staffing Schedule Standardization**: In January 2014, the nursing division implemented a standard calendar for staffing schedule development and roll-out. All nursing units submit
their schedule to the staffing office prior to publication to allow additional resources to be
allocated and balanced across nursing units. This allows for patient centered and consistent
allocation addressing RN needs system-wide.

5. **Unit Based Nursing Councils:** All nursing units have a unit-based nursing council that leads
the practice improvement efforts for their units. Council membership includes RNs, a
member of nursing management and other interdisciplinary colleagues ad hoc. Unit
Councils form the foundation of the shared decision making structure. Such a foundation
ensures that the voice of the clinical RN is included when decisions are made that impact
clinical practice and the quality and safety of patient care as well as the environment in
which it occurs.

6. **Budget review and position control alignment:** The budget process for the Division of
Nursing includes a comprehensive review of current performance to targets and ensures a
standard, transparent, consistent alignment of nursing division staffing plans with the needs
of the patient populations served.

7. **Overall RN Turnover:** Critical to maintaining adequate staffing levels, WakeMed RN turnover
data for 2014 ranged from 8.75% - 9.63%, well below the benchmark of 14.7% set by the

8. **Executive Summary for Leapfrog Standards:** Nursing staff services and nursing leadership
standards review was posted publicly on the WakeMed Quality external website.

**Next Steps**

1. Continue education, analysis of nursing staffing with adverse events, and budget planning
for 2015 with Nursing Leadership.

2. Anticipate Magnet site visit Summer 2015. If Magnet designated, quarterly updates to
Administration and the Board of Directors will no longer be required to comply with
Leapfrog Nursing Staff Services and Nursing Leadership standards.
Reference List


Appendix A

NDNQI Graph for Nursing Unit 3A
(Referenced on page 3)

Participation in the NDNQI database allows our nursing units to benchmark against similar unit types from >2000 hospitals across the U.S. Nurse-sensitive indicators reported include Nursing Hours per Patient Day, Falls, Falls with Injury, Restraints, and Pressure Ulcers. Staffing can then be correlated with adverse events with the graph below.

For this particular unit, Raleigh Campus 3A, total falls have trended down despite total nursing hours per patient day and RN hours per patient day being below the mean benchmark. Key initiatives such as compliance with hourly rounds and utilization of bed alarms have positively impacted patient safety for falls.

TNHPPD – total nursing hours per patient day includes RNs and Nurse Aides
RNHPPD – RN hours per patient day
Appendix B
System Nursing Dashboard
(Referenced on page 6)
Appendix C
New RN Graduate Retention
(Referenced on page 6)

Wakemed Nursing Fellows One Year Retention Percentage

Benchmark Reference: Harrison, 2014
Appendix D
Practice Alert
(Referenced on page 7)

One method of communicating vital information regarding adverse events and practice changes is through the use of Practice Alerts, Practice Advisories, and Education Packets. Nursing implemented a guide to determine how information is distributed to all nursing staff.

a. Practice Alerts are sent for critical, sentinel or major safety events and have a **red template**.

b. Practice Advisories are sent out for best practices, practice changes or updates, and evidence-best practice standards and have a **yellow template**.

c. Other information is communicated using the education template.

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**WAKEMED HEALTH & HOSPITALS**
**NURSING PRACTICE ALERT**
**TOPIC: Over Sedation May 2014**

**Situation:** Over sedation is a consistently reported source of adverse drug events at WakeMed. We have had events where patients have been harmed related to opioid drug administration. According to the Joint Commission, “Opioid analgesics rank among the drugs most frequently associated with adverse drug events”.

This Practice Alert will speak directly to this issue.

**Background:** Causes for the adverse events associated with opioid use include:

- Not understanding the potency differences within this group of drugs
- Not understanding how the different routes and opioid drugs interact
- Inadequate monitoring of patients on opioids

**Assessment:** Together with the Medical Staff and pharmacists, nurses have a critical role in preventing adverse drug events associated with opioid use.

**Recommendations:**

- Review your patient’s history for characteristics that put him/her at higher risk for over sedation and respiratory depression (ex. Severe or sleep apnea diagnosis, morbid obesity, no recent opioid use or first-time use of opioids, reviewing other sedating drugs, pre-existing pulmonary or cardiac disease).
- Monitor these high risk patients more closely for quality of respirations and sedation level especially during the peak effect of the opioid you’ve administered.
- Administer pain medications according to physician order based on the intensity of pain score and frequency of medications to be administered. Giving a pain medication more frequently than ordered is practicing outside the scope of nursing.
- Consult your pharmacist when you are unsure of potential adverse or cumulative effects of opioids on your patient.
- Speak with the prescribing physician to clarify confusing or unclear pain management orders such as duplicate orders for pain medications or treating the same level of pain.
- The usual onset of action for IV opioids is within 5 minutes with the peak occurring between 5-20 minutes. Watch your patient carefully during this time for signs and symptoms of over sedation. See attached article for more information on assessment of sedation during opioid administration.
- Remember: 1 mg of Hydromorphone (Dilaudid) is equivalent to 7 mgs of Morphine.
- Watch for more information to come in the next few months on this topic including important policy changes.

**Keeping our patients safe is our number one priority.**

**References:**
1. The Joint Commission Sentinel Event Alert “Safe Use of Opioids in Hospitals” Issue 49, August 8, 2012
Appendix E
RN Turnover Rate
(Referenced on page 10)

Overall RN Turnover Rate 2014

- Overall RN Turnover Rate
- NC Healthcare HR Assoc