

2020 MAGNET® SITE VISIT GUIDE



Phelps Hospital
Northwell Health®



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OR

Mark your Calendars!
The Virtual Magnet®
Site Visit will be from:
August 19, 2020
to
August 21, 2020

Created by: Kathleen Calabro

2020 MAGNET® SITE VISIT GUIDE OBJECTIVE

ALLOW THE READER TO BE PREPARED FOR THE SITE VISIT BY OBTAINING KNOWLEDGE OF THE FOLLOWING:

- ❖ *Phelps Hospital Magnet® Journey*
- ❖ *Magnet Recognition Program®*
- ❖ *Magnet components and how they apply to nursing at Phelps*
- ❖ *Evolution of our Professional Practice Model*
- ❖ *Shared Governance Model*
- ❖ *Nursing reporting structure*
- ❖ *The Nursing Strategic Plan*
- ❖ *Your unit or divisions inspirational and innovative stories highlighted in our Magnet® Document*

BACKGROUND

IN 2017

PHELPS HOSPITAL COMPLETED A GAP ANALYSIS.

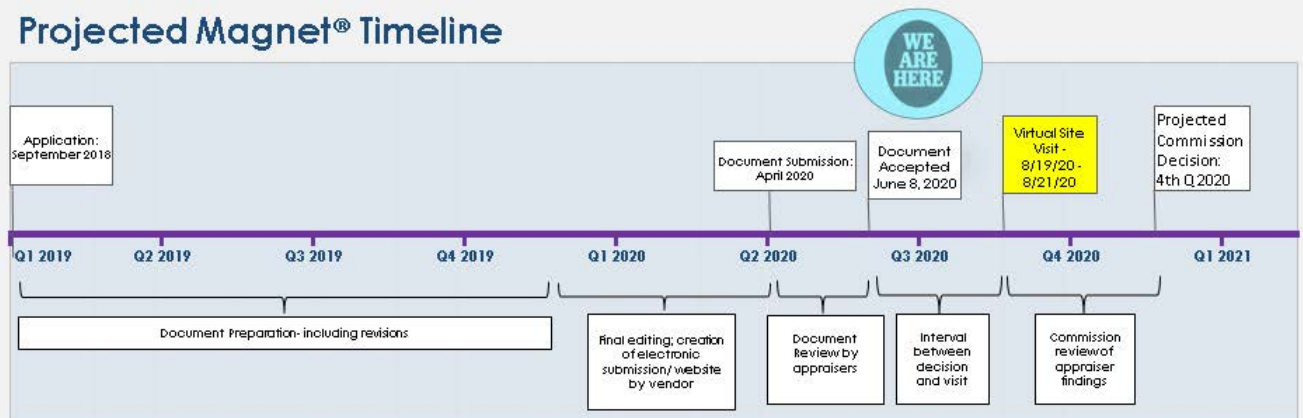
BASED ON THE FINDINGS, IT WAS DETERMINED THAT WE SHOULD JOIN OTHER SELECT NORTHWELL HEALTH HOSPITALS TO PURSUE THE PRESTIGIOUS MAGNET® AWARD.

THUS OUR MAGNET® JOURNEY BEGAN.

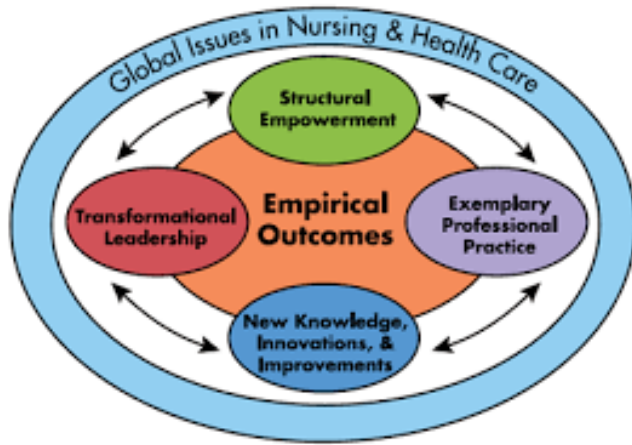
MAGNET® APPRAISERS HAVE REVIEWED AND APPROVED OUR MAGNET® DOCUMENT. WE ARE CURRENTLY IN THE PHASE TO PREPARE FOR OUR SCHEDULED VIRTUAL SITE VISIT FROM 8/19/20 - 8/21/20.

THE SITE VISIT IS YOUR TIME TO ... SHINE!

Projected Magnet® Timeline



The following pages explain the Magnet® Components and how they apply to Nursing at Phelps Hospital.



Magnet® Model

WHAT IS THE MAGNET RECOGNITION PROGRAM®?

The Magnet Recognition Program designates organizations worldwide where nursing leaders successfully align their nursing strategic goals to improve the organization's patient outcomes. The Magnet Recognition Program provides a roadmap to nursing excellence, which benefits the entire organization. To nurses, Magnet Recognition means education and development through every career stage, which leads to greater autonomy at the bedside. To patients, it means the very best care, delivered by nurses who are supported to be the very best that they can be.¹

BENEFITS OF MAGNET®:

- Highest standard of care for patients.
- Staff who feel motivated and valued.
- Business growth and financial success¹

¹ <https://www.nursingworld.org/organizational-programs/magnet>

² <https://www.indeed.com/career-advice/career-development/transformational-leadership>

³ http://lippincottolutions.lww.com/blog.entry.html/2017/10/06/at_the_core_of_magne-Xfs8.html

TRANSFORMATIONAL LEADERSHIP (TL)

Transformational leadership is a process where leaders and followers raise each other up to higher levels of motivation. A good transformational leader does the following:²

- ❖ Provides encouragement
- ❖ Sets clear goals
- ❖ Provides recognition and support
- ❖ Models fairness and integrity
- ❖ Provokes positive emotions in others
- ❖ Inspires people to achieve their goals

STRUCTURAL EMPOWERMENT (SE)

Structural empowerment allows for shared decision making involving direct care nurses through an organizational structure that is decentralized. While the chief nursing officer has an active role on the highest-level councils and committees, standards of practice and other issues of concern are handled by groups that allow direct care nurses of all levels to exercise influence.³

EXEMPLARY PROFESSIONAL PRACTICE (EP)

This entails a comprehensive understanding of the role of nursing; the application of that role with patients, families, communities, and the interdisciplinary team; and the application of new knowledge and evidence.¹

NEW KNOWLEDGE, INNOVATIONS & IMPROVEMENTS (NK)

Our current systems and practices need to be redesigned and redefined if we are to be successful in the future. This Component includes new models of care, application of existing evidence, new evidence, and visible contributions to the science of nursing.¹

EMPIRICAL OUTCOMES (EO)

Focuses on the outcomes of structures and processes and how they compare to national benchmark data.

Phelps Hospital Mission

- Improving the health of the community we serve;
- Sustaining an environment of excellence where medical, social and rehabilitative services are delivered proficiently, efficiently and effectively;
- Offering a broad range of preventative, diagnostic and treatment services;
- Educating our community to achieve optimal health outcomes and quality of life;
- Striving to enhance the personal and professional excellence of our medical, nursing, paraprofessional, technical, administrative and support staff;
- Providing care in a safe, modern environment where advanced medical techniques and effective management and planning are coupled with the strong Phelps tradition of caring.

NURSING DEPARTMENT'S MISSION

TO PROVIDE QUALITY CARE TO OUR PATIENTS,
FAMILIES AND COMMUNITY THROUGH
EXCELLENCE IN CULTURE, QUALITY, PRACTICE,
COLLABORATION, INNOVATION AND
EDUCATION.

Nursing Strategic Plan

TRANSFORMATIONAL LEADERSHIP

Do you have a mentor that guides and supports you at Phelps? How has that impacted you?

Was there a time where communication with your CNO, Mary McDermott, your director or your manager influenced change in the hospital and/or your unit?

During the COVID-19 Crisis did your leadership show support?



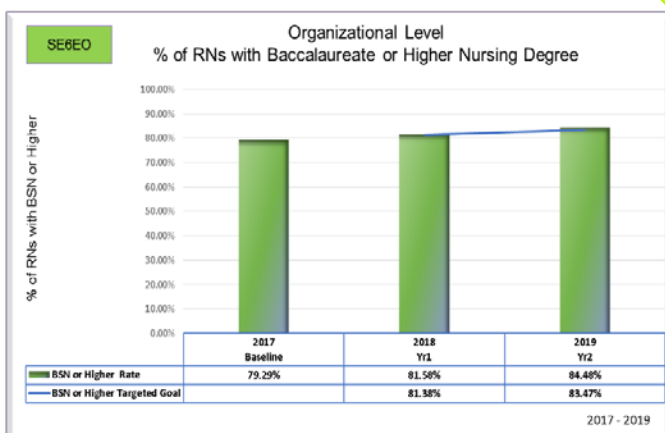
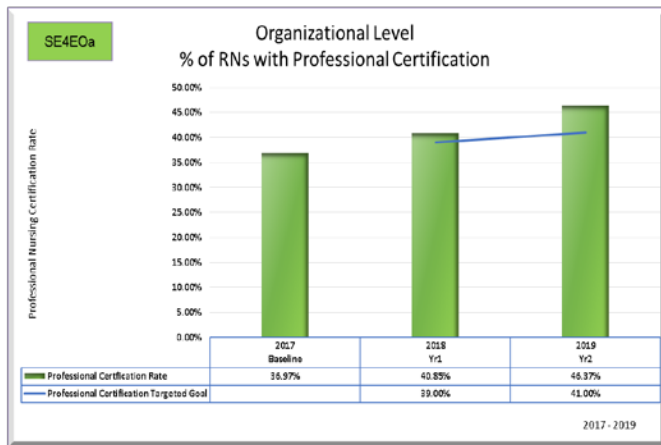
STRUCTURAL EMPOWERMENT

Shared governance day is the third Wednesday of every month. We attempt to have unit representation at every council. The following councils make up our shared governance structure:

- ❖ New Knowledge
- ❖ Professional Practice & Development
- ❖ Quality & Safety
- ❖ CNO Advisory
- ❖ Recruitment, Retention and Recognition
- ❖ Advance Practice Registered Nursing (APRN)

Each council has a: charter, agenda, meeting minutes, attendance, highlights and yearly accomplishments. These documents can be found on the nursing website under shared governance. Please reference pg. 9 to view the shared governance schematic.

Graphs highlighted at Professional Practice that we take pride in:



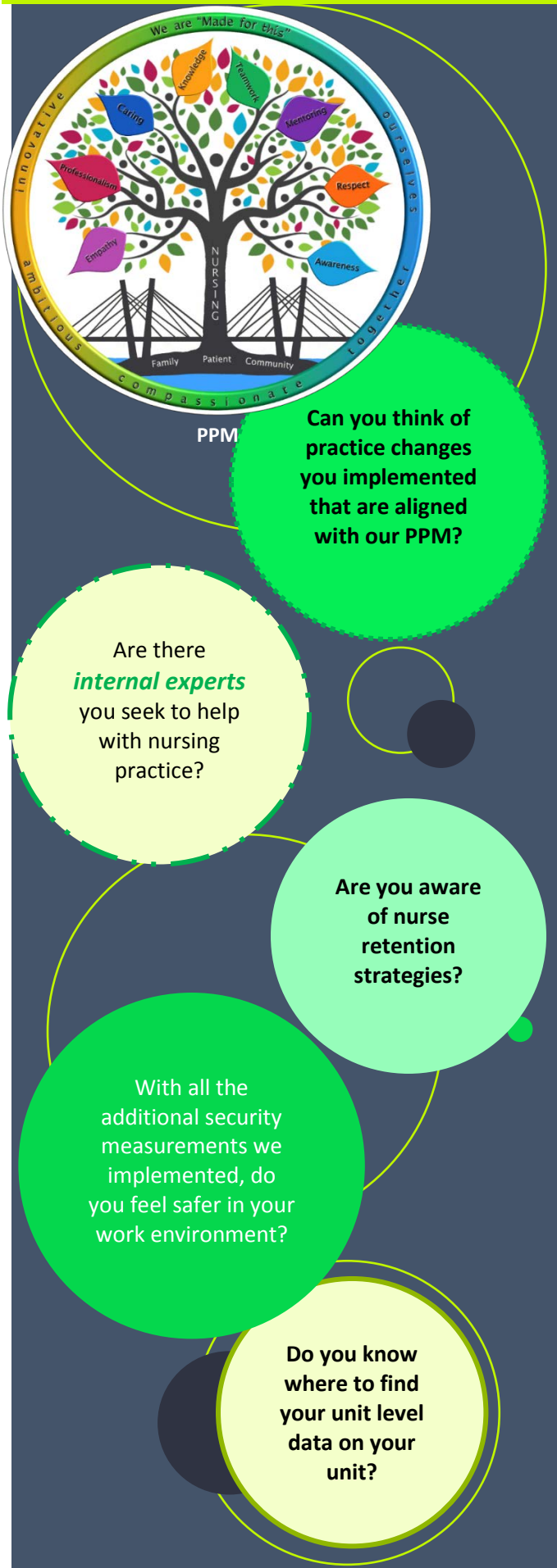
Has the hospital supported you in your volunteer efforts?

Has the hospital recognized you for your contributions in addressing the strategic priorities of the organization?

How has the hospital supported your professional growth?

Opportunities and support for continuing education:

- Onsite accredited live continuing education
- Access to e-learning – CE Direct
- HealthStream
- Longstanding reimbursement for continuing education
- Longstanding support for review courses and exam reimbursement
- Northwell policy; Longstanding certification differential
- Longstanding BSN differential
- Longstanding tuition reimbursement
- Nursing Promise grant
- Success Pays



Magnet "Fab 5"

- 1) RN Satisfaction - 2019 NDNQI RN Survey
please reference EP2EO in the magnet document
Selected
 - Adequacy of Resources & Staffing
 - Fundamentals of Quality Nursing Care
 - Autonomy
 - Professional Development - Access
- 2) Inpatient Clinical Indicators
please reference EP18EO in the magnet document
 - Falls with Injury
 - HAPI Stage 2 & Above
 - CAUTI
 - CLABSI
- 3) Ambulatory Clinical Indicators
please reference EP19EO in the magnet document
 - Falls with Injury
 - Patient Burns
- 4) Inpatient Patient Satisfaction
please reference EP20EO in the magnet document
Selected
 - Patient Engagement
 - Service Recovery
 - Courtesy & Respect
 - Responsiveness
- 5) Ambulatory Patient Satisfaction
please reference EP21EO in the magnet document
Selected
 - Patient Engagement
 - Patient Education
 - Safety
 - Courtesy & Respect



Successful Measurement:

The majority of the units outperform the national database benchmark the majority of the time.

NEW KNOWLEDGE, INNOVATIONS & IMPROVEMENTS

Have you participated in the implementation of evidenced based practice (EBP) on your unit?

INNOVATION!

PLEASE access the nursing website for essential and exciting nursing information! *Click on the heart icon on the Phelps Intranet or*

<https://1065226.site123.me/>

Did you know there is an **on-line Journal Club** in the Nursing Website with several thought provoking articles? Would love to hear from you!

Can you think of a time where you adopted technology that improved a patient outcome?

During COVID-19 Response, did you adopt innovative solutions?

PHELPS HOSPITAL RESEARCH STUDIES

Principal Investigator (PI)

"THE EFFECT OF AN EDUCATIONAL INTERVENTION ON PERIOPERATIVE REGISTERED NURSES KNOWLEDGE, ATTITUDES, BEHAVIORS AND BARRIERS TOWARD PRESSURE INJURY PREVENTION IN SURGICAL PATIENTS"

Co-PI: Catherine McCarthy, Lorrie Presby

"COLORING MANDALAS TO REDUCE ANXIETY IN ADULT PSYCHIATRIC UNIT"

Co-PI: Doreen Wall, Maura Maier

"EVALUATING THE EFFICACY OF A MINDFULNESS-BASED MOBILE APPLICATION ON STRESS REDUCTION AMONGST NURSES"

PI: Candace Huggins

"IMPACT OF EDUCATIONAL PROGRAM ON 'EXPRESSIONS OF HUMANISM' ON CARING BEHAVIORS, PATIENT EXPERIENCE AND QUALITY OUTCOMES"

PI: Elizabeth Wiley

"NORTHWELL-PHELPS IMMERSION IN CLINICAL EMPATHY & REFLECTION- PILOT (NICER-P)"

PI: Candice Johnson

BASED ON COVID-19 RESPONSE

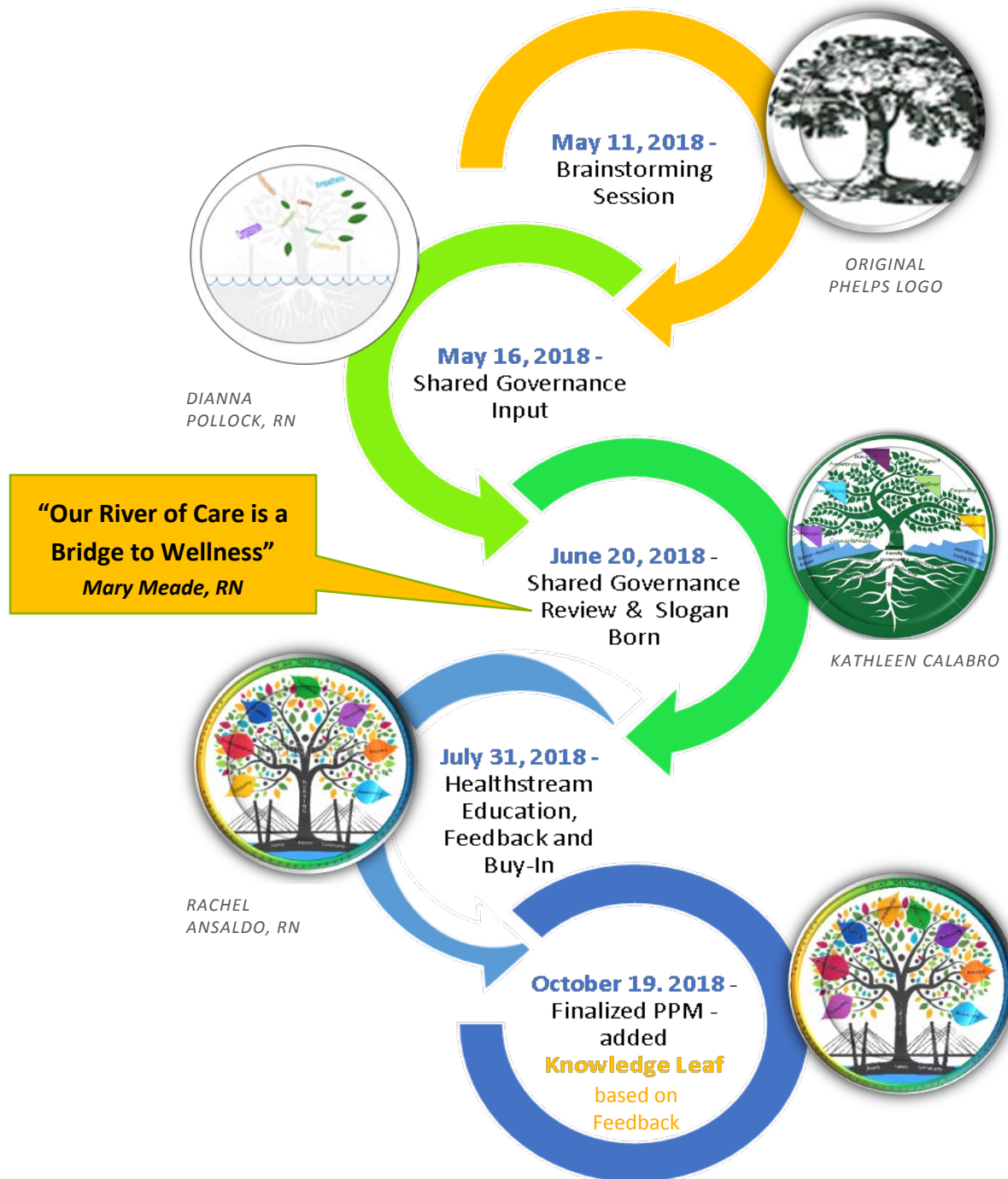
CONVALESCENT PLASMA FOR THE TREATMENT OF PATIENTS WITH COVID -19

HYPERBARIC OXYGEN STUDY - EVALUATING A POSSIBLE TREATMENT FOR COVID PATIENTS

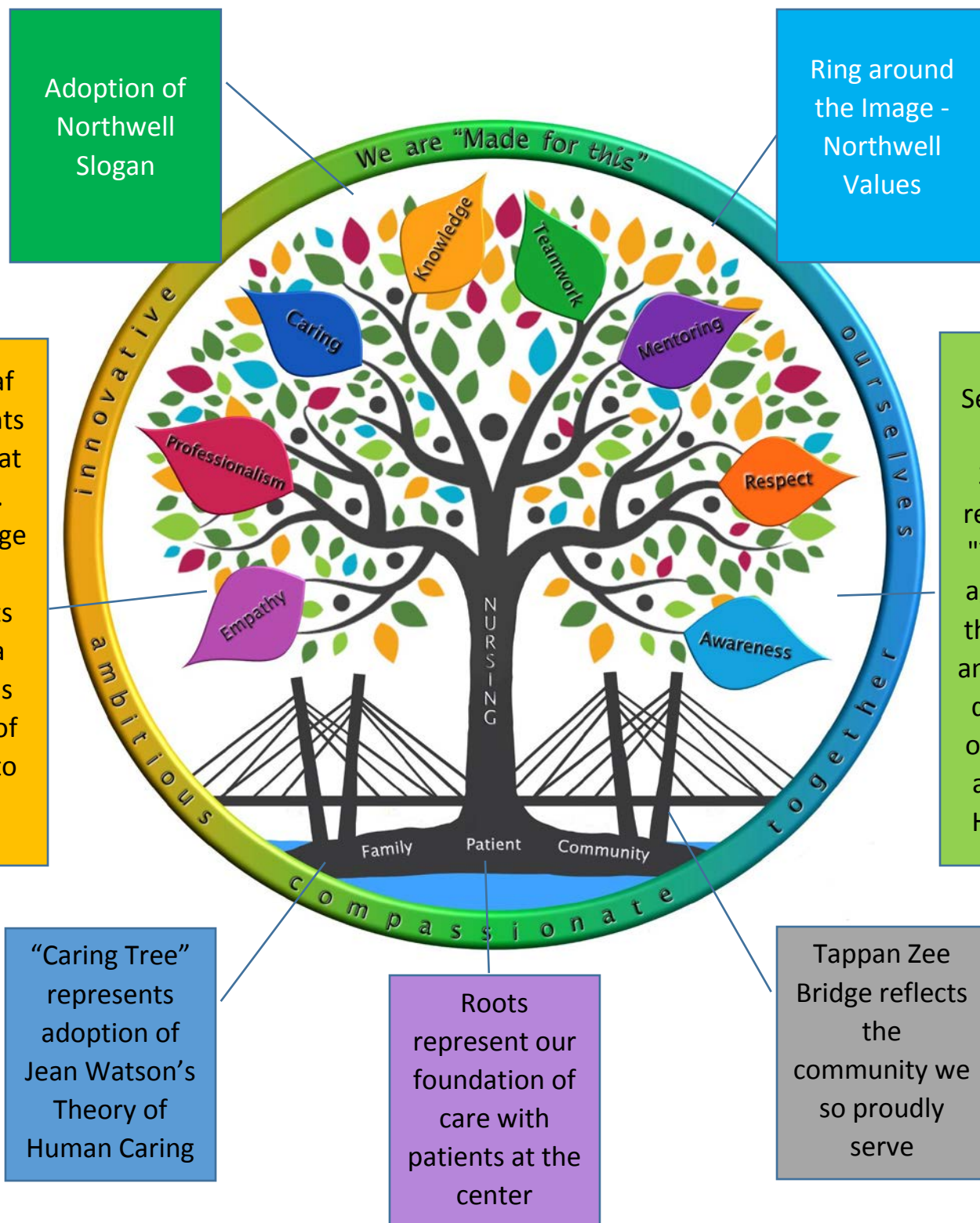
CLINICAL CHARACTERISTICS OF COVID + PATIENTS WITH CANCER

EVOLUTION OF THE PROFESSIONAL PRACTICE MODEL (PPM)

What is a Professional Practice Model (PPM)? The driving force of nursing care. “It is a schematic description of a system, theory, or phenomenon that depicts how nurses practice, collaborate, coordinate, and develop professionally to provide the highest-quality care for people served by the organization (e.g. patients, families, communities).” Professional Practice Models illustrate “the alignment and integration of nursing practice with the mission, vision and values that nursing has adopted”¹

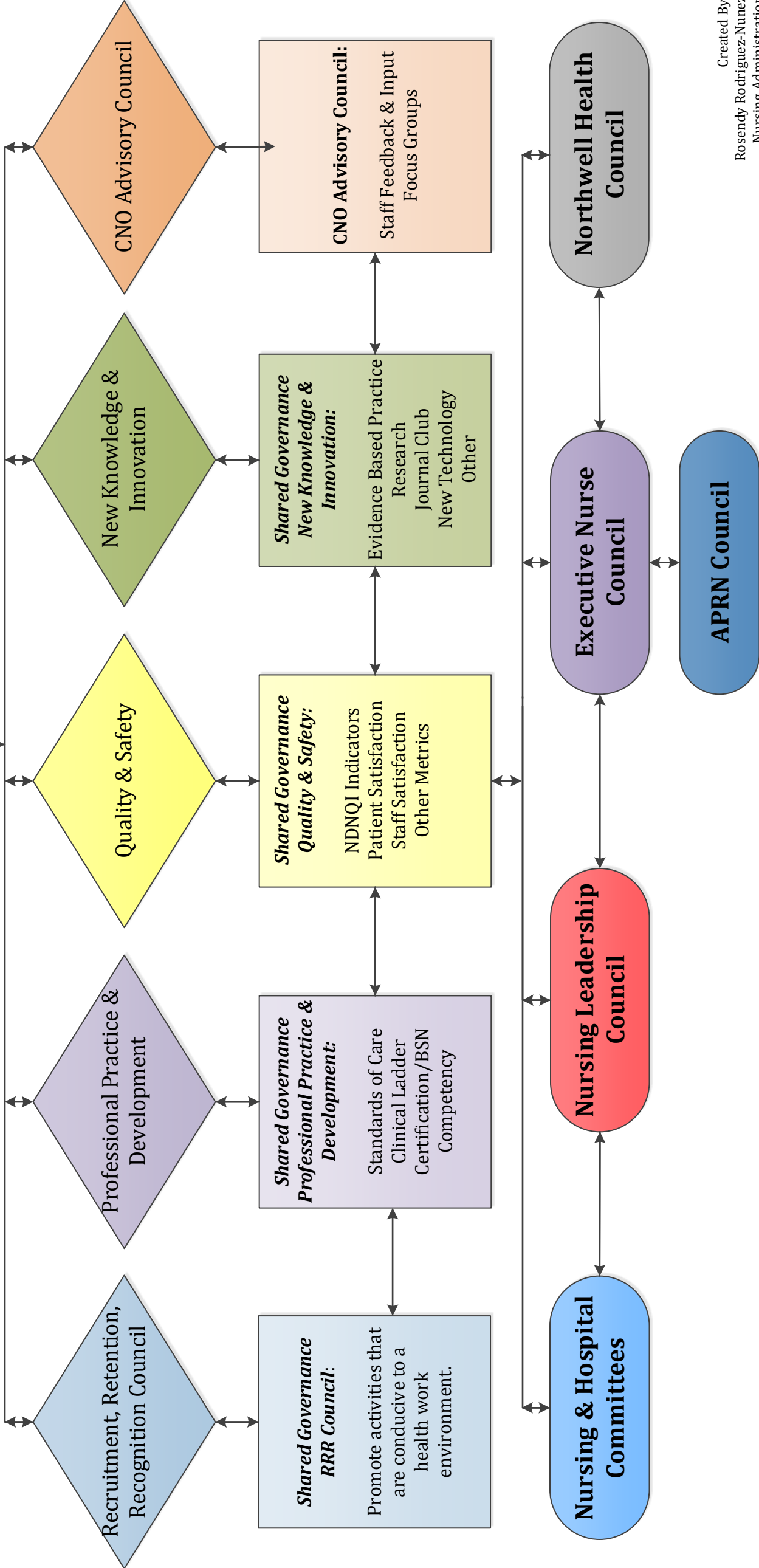


Understanding our Professional Practice Model



Designed by: Rachel Ansaldo, BSN, RN

**Unit Based
Nursing Shared Governance**



NEW KNOWLEDGE AND INNOVATION 2019 ANNUAL REPORT

2019 ACCOMPLISHMENTS:

- 5 Approved IRB studies
 - 2 Completed
 - 3 In progress
- Adoption of Northwell EBP Guidelines
- Nurse Residency Program
- Clinical Scholar Program:
 - Searching and appraising the literature
 - Abstract writing
 - Presentations
 - Internal audiences
 - External audiences



PROFESSIONAL PRACTICE & DEVELOPMENT (PPD) 2019 ANNUAL REPORT

2019

ACCOMPLISHMENTS:

- Ongoing monitoring of:
 - BSN Rates
 - Certification Rates
 - Clinical Career Ladder Advancements
- Individualized TeamSTEPPS®
- Portfolio template created in ED then shared with other areas
- Provided clarity to the Peer feedback tool by brainstorming examples for each value
- “We are made for this video” created by PPD co-chair, Candice Johnson, BSN, RN
- Succession planning
- Standards of care updates



QUALITY AND SAFETY 2019 ANNUAL REPORT

2019 ACCOMPLISHMENTS:

- Input into the unit-specific dashboards with metrics and suggested glossary for better understanding
- Ongoing review of data for:
 - Patient Satisfaction
 - Nurse-sensitive quality indicators
 - Performance improvement
 - Readmission Rate
- Continued report-out to the Performance Improvement Coordinating Group (PICG)
- Sparked idea for the Nursing Phone Interruption Analysis. Findings - peak interruptions during Medication Administration. Brainstorming of possible intervention(s) to be discussed and rolled out in 2020.

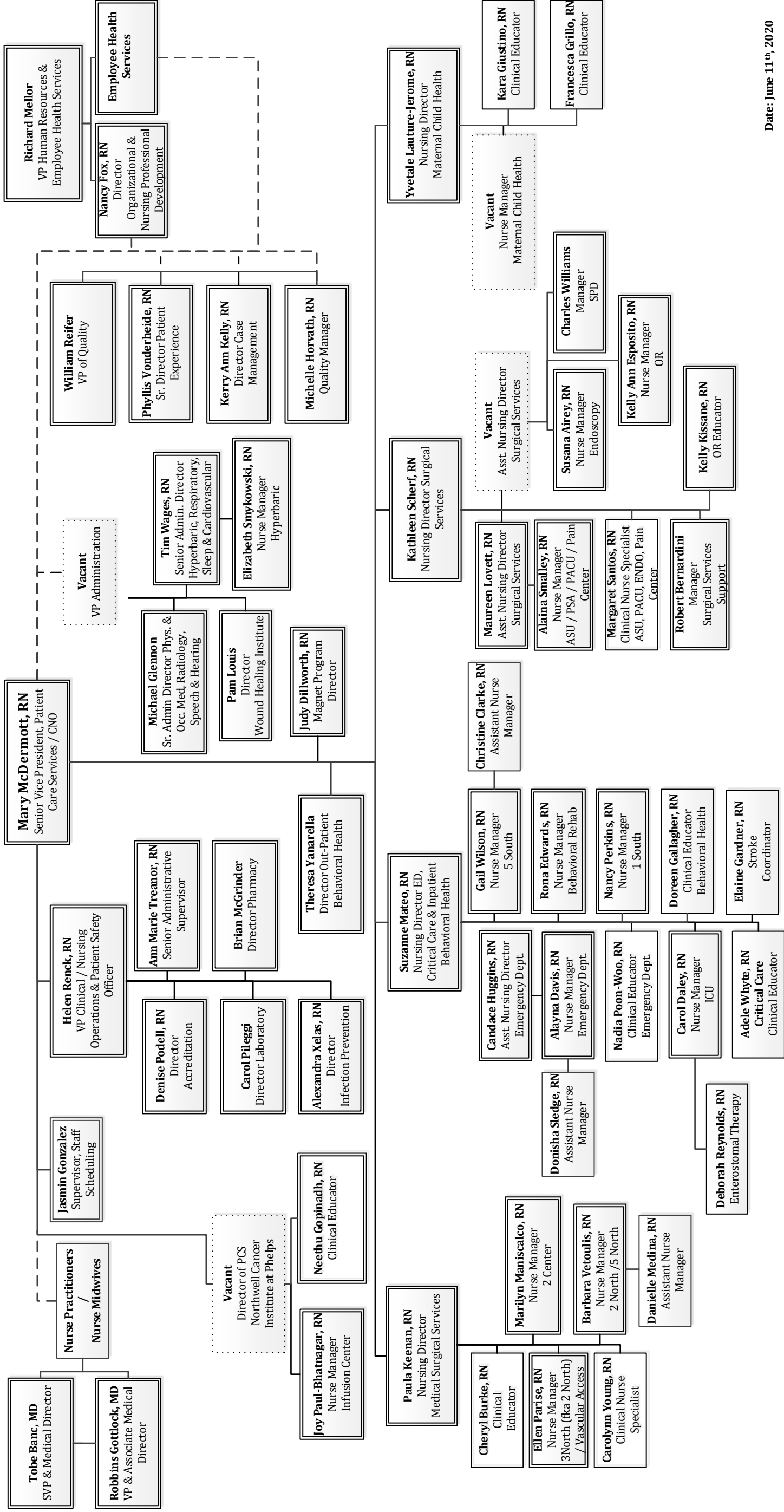


CNO ADVISORY COUNCIL 2019 ANNUAL REPORT

2019 ACCOMPLISHMENTS:

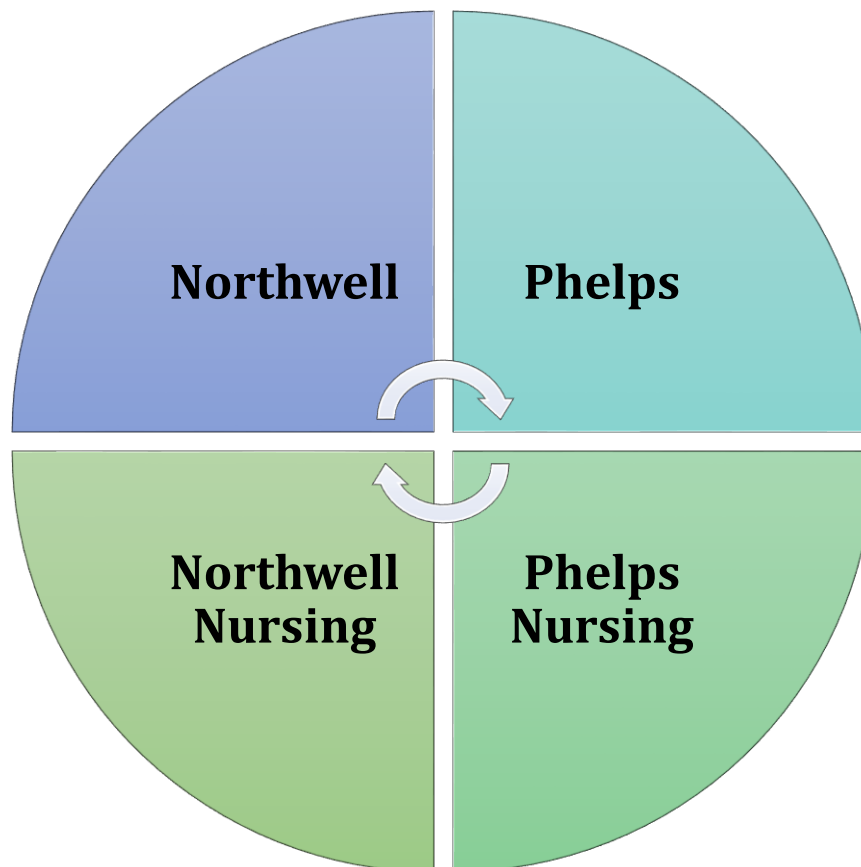
- Continued ability for nurses to escalate and or validate issues on their units with the support of their CNO.
- Staffing needs escalated and addressed on 2 center.
- Input into the new nursing uniforms.
- Provided “out-of-the-box” suggestions for leadership based on the NDNQI RN Satisfaction Survey.
- Suggested for 2020 the RRR Council monitor hospital events in order to better prepare and plan for celebrations.
- 12 hour shifts requested and approved for the Behavioral Rehab Units.





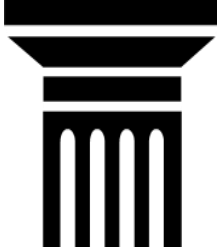
Nursing Strategic Plan

The Nursing Strategic Plan embodies the mission and overarching goals of both the Northwell System and Phelps Hospital. It is reflective of and aligned with Northwell Systems Patient Care Services Strategic Plan and the Hospitals Growth Plan and Strategic Initiatives ([Appendix B1](#)). It is grounded in our Professional Practice Model and the Phelps Hospital Nursing Quality and Safety Plan ([Appendix B2](#)) “to develop and sustain an environment of professional excellence in nursing practice in concert with the Hospital’s mission.”



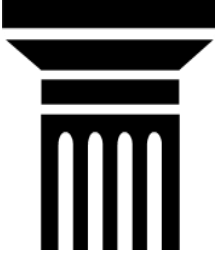
Goals

Quality



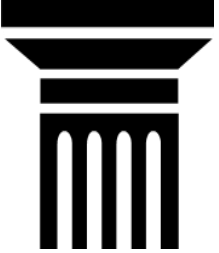
Foster an evolving Culture of Safety through Evidence Based Nursing Practice that cultivates learning and promotes innovation across the Quality of Care.

People



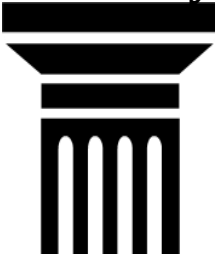
Create an empowering environment for RNs to function at the highest level of their licensure.

Service



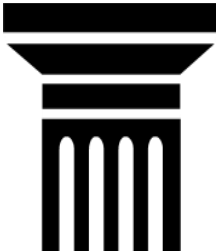
Develop and offer programs that heighten work force engagement and generate improved patient experience outcomes.

Efficiency



Develop transformational leaders at all levels who motivate, inspire and challenge their teams to deliver experiences our patients and customers desire.

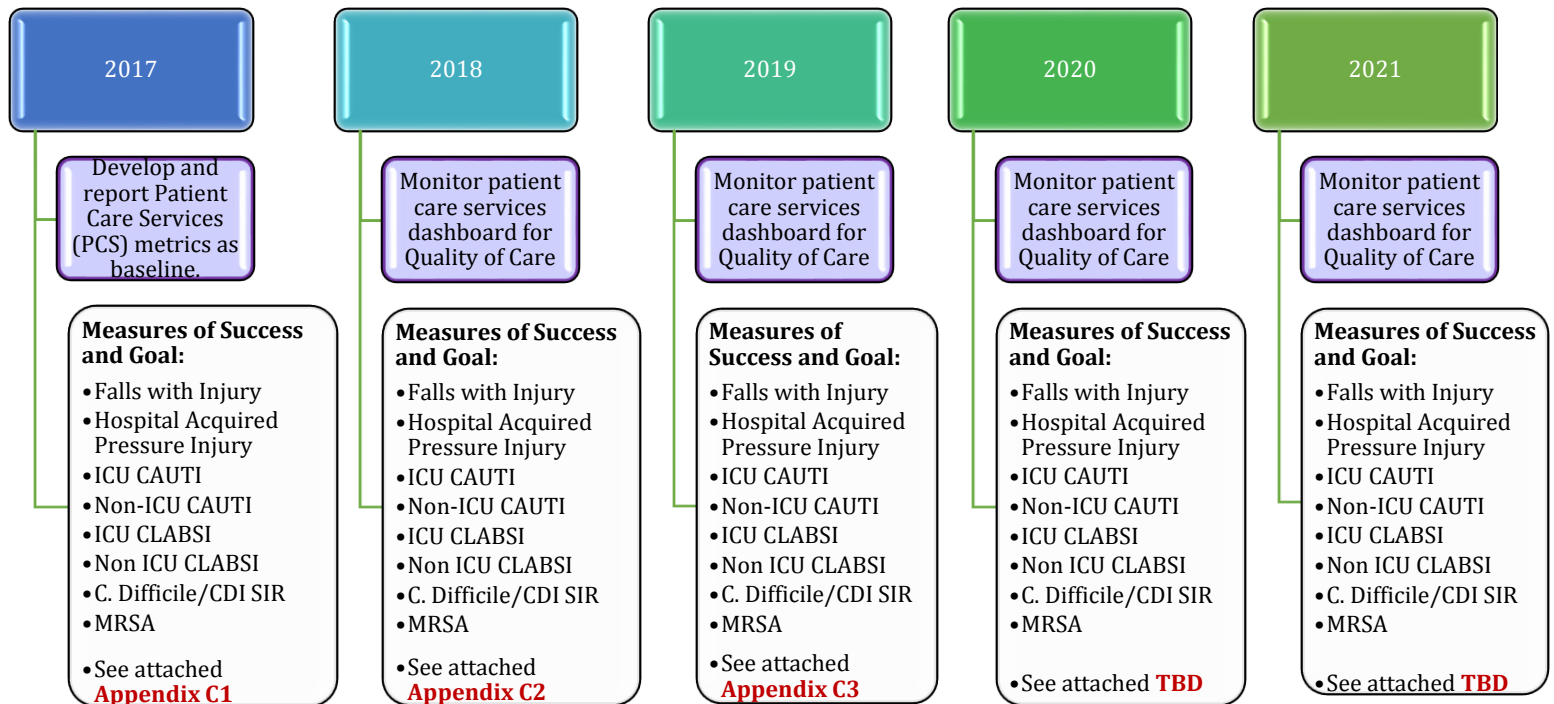
Finance



Optimize the provision of quality care by assuring effective fiscal management.

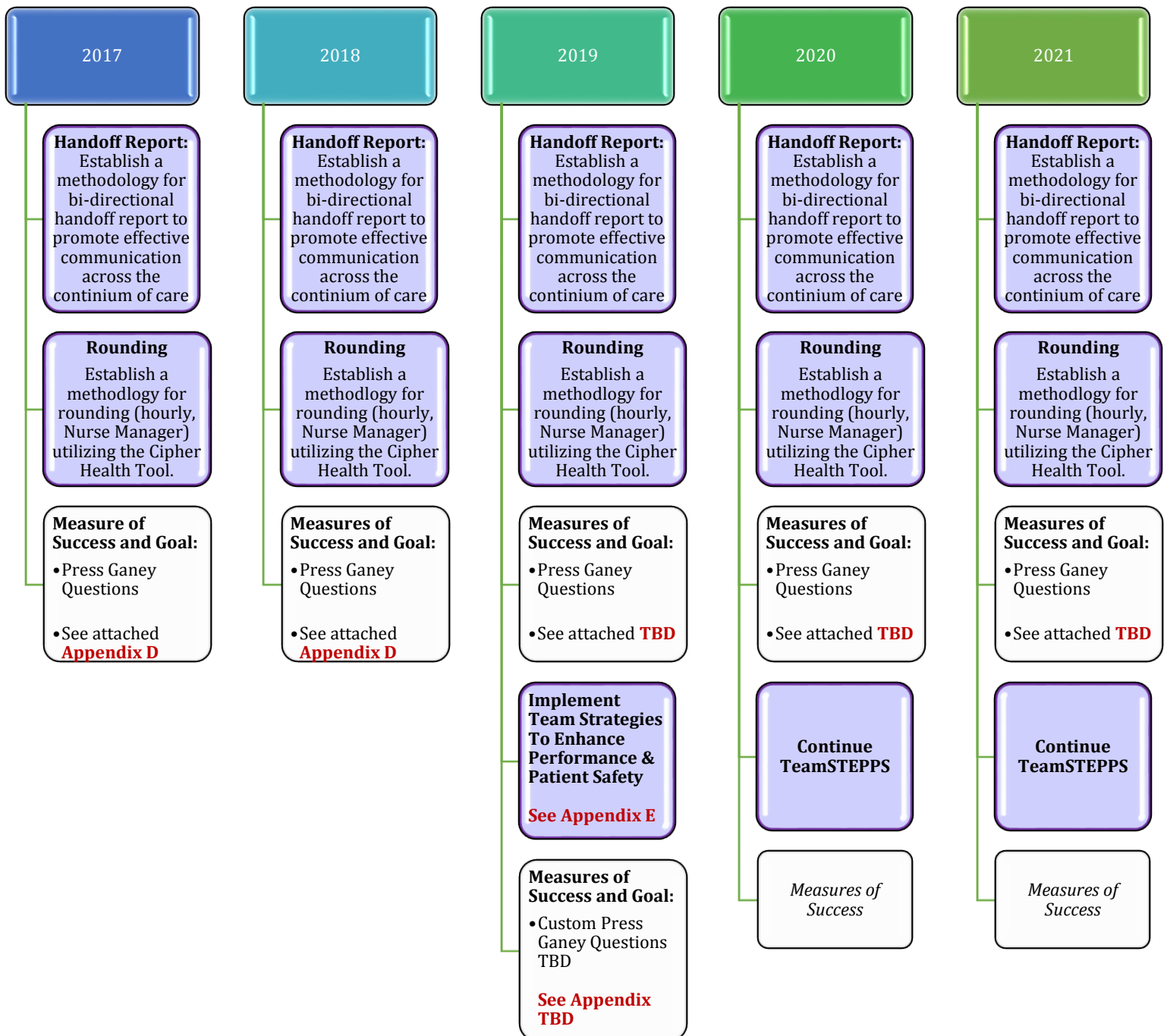
Quality

GOAL: Foster an evolving Culture of Safety through Evidence Based Nursing Practice that cultivates learning and promotes innovation across the continuum of care.



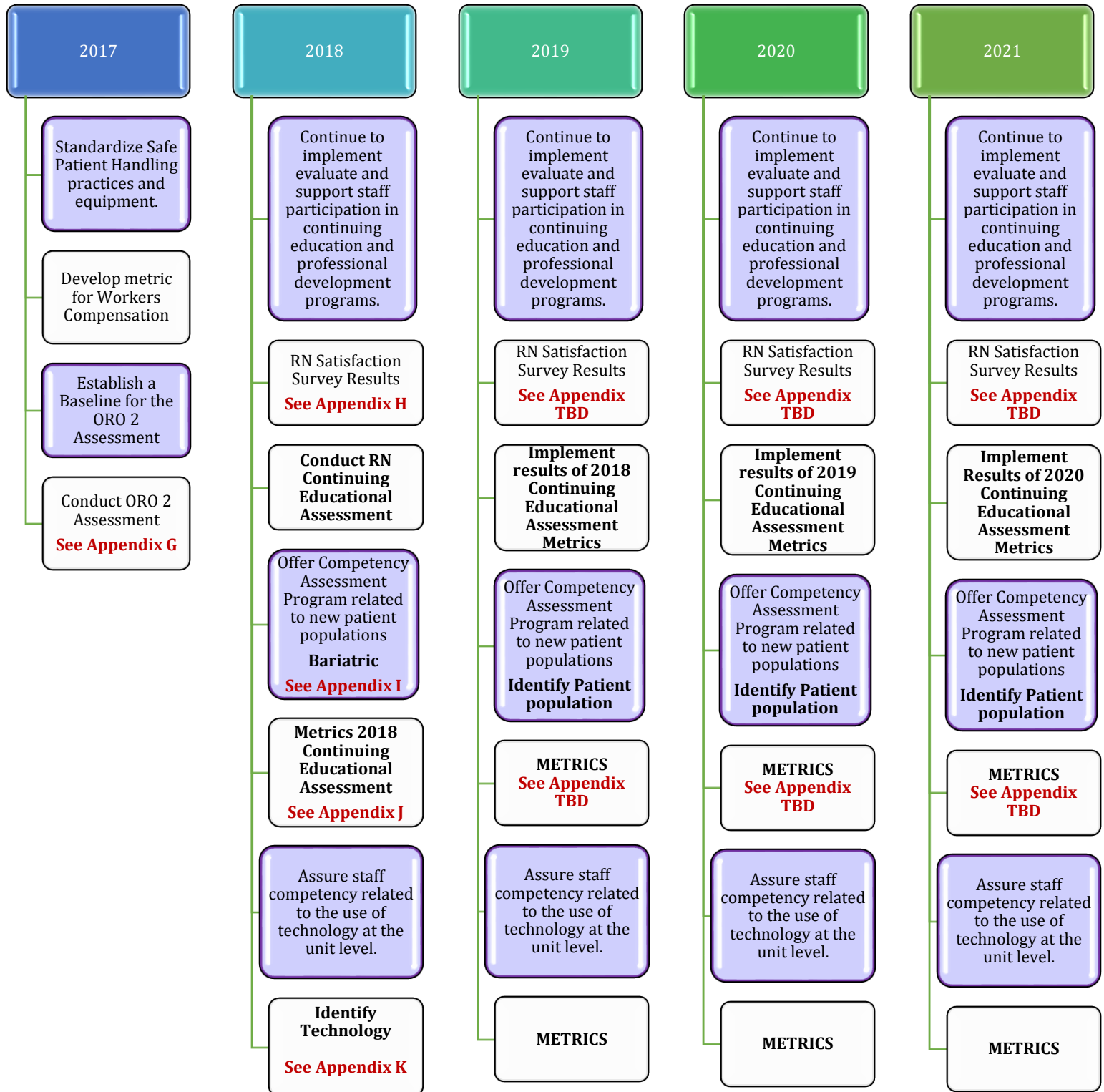
Quality

GOAL: Foster an evolving Culture of Safety through Evidence Based Nursing Practice and nursing research that cultivates learning and promotes innovation across the continuum of care.



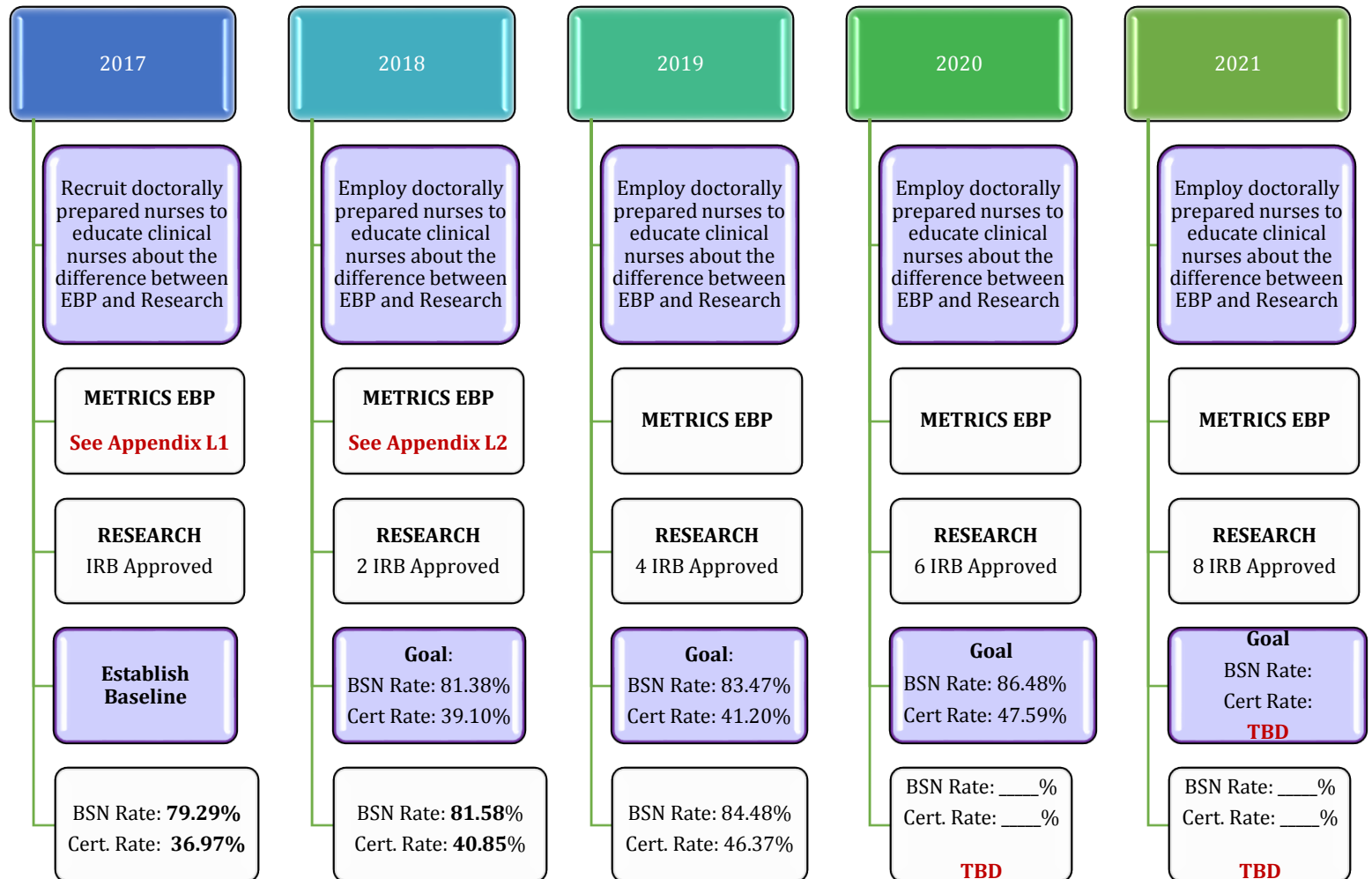
People

GOAL: Create an empowering environment for RNs to function at the highest level of their licensure.



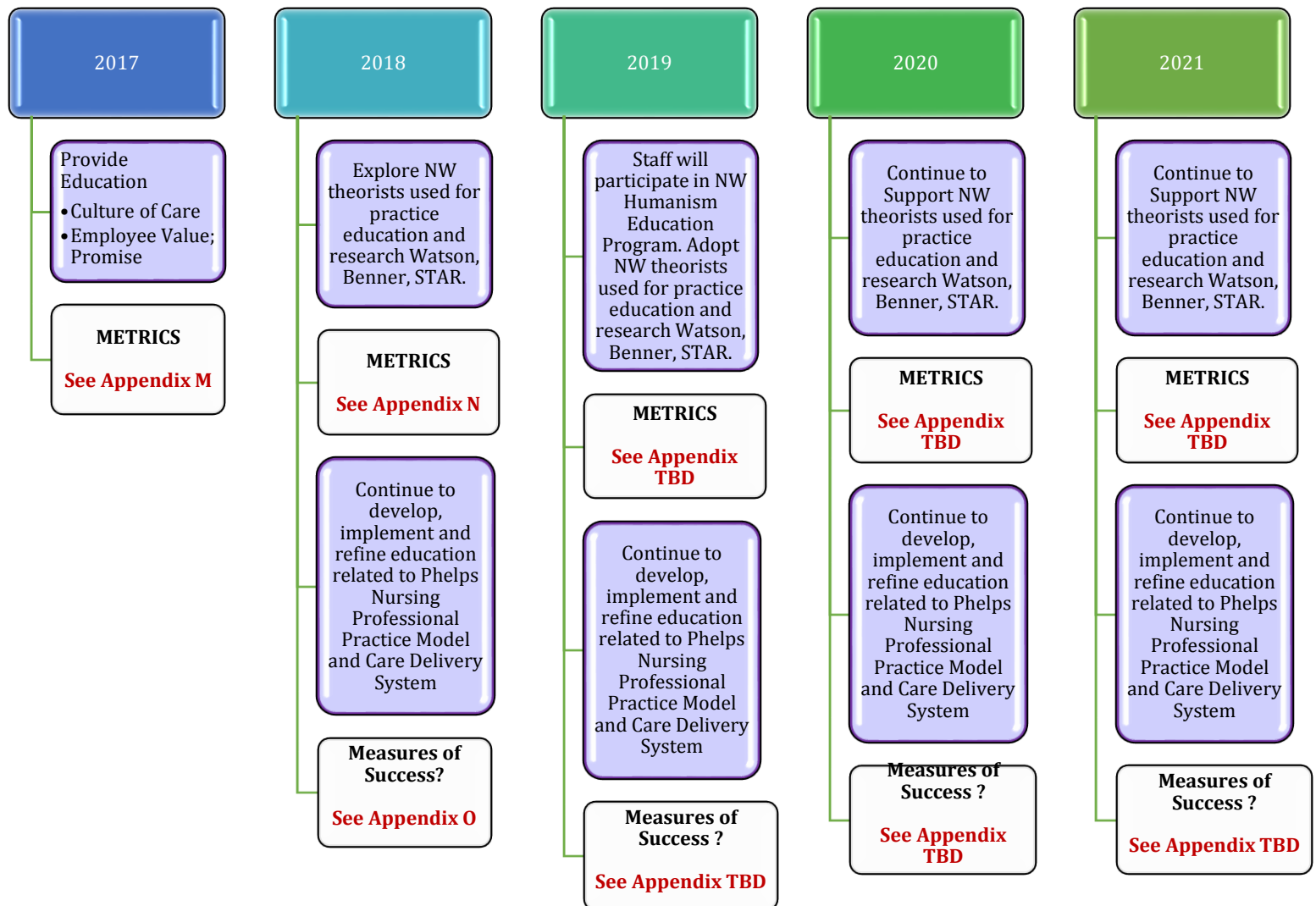
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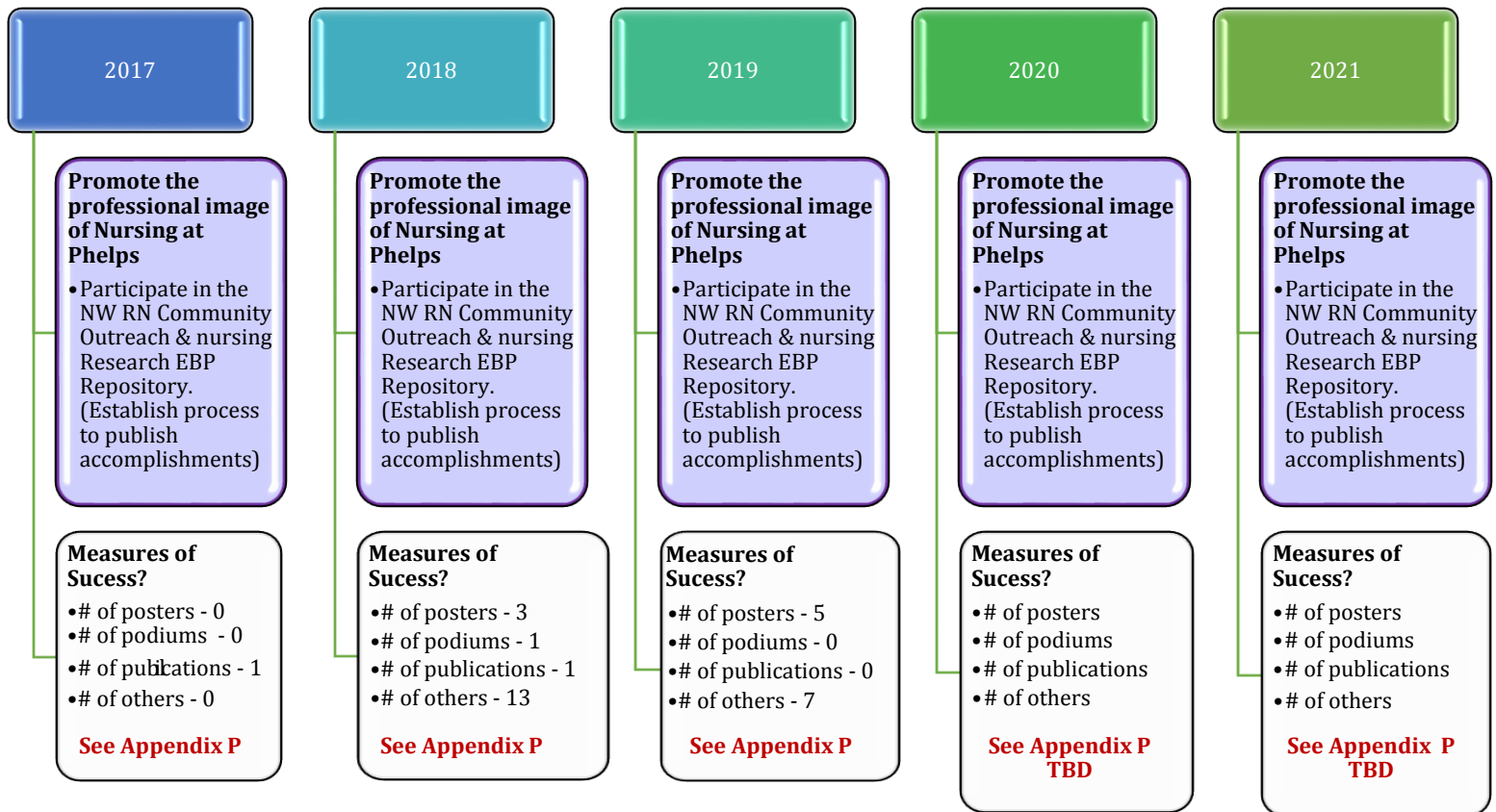
Service

GOAL: Develop and offer programs that heighten work force engagement and generate improved patient experience outcomes.



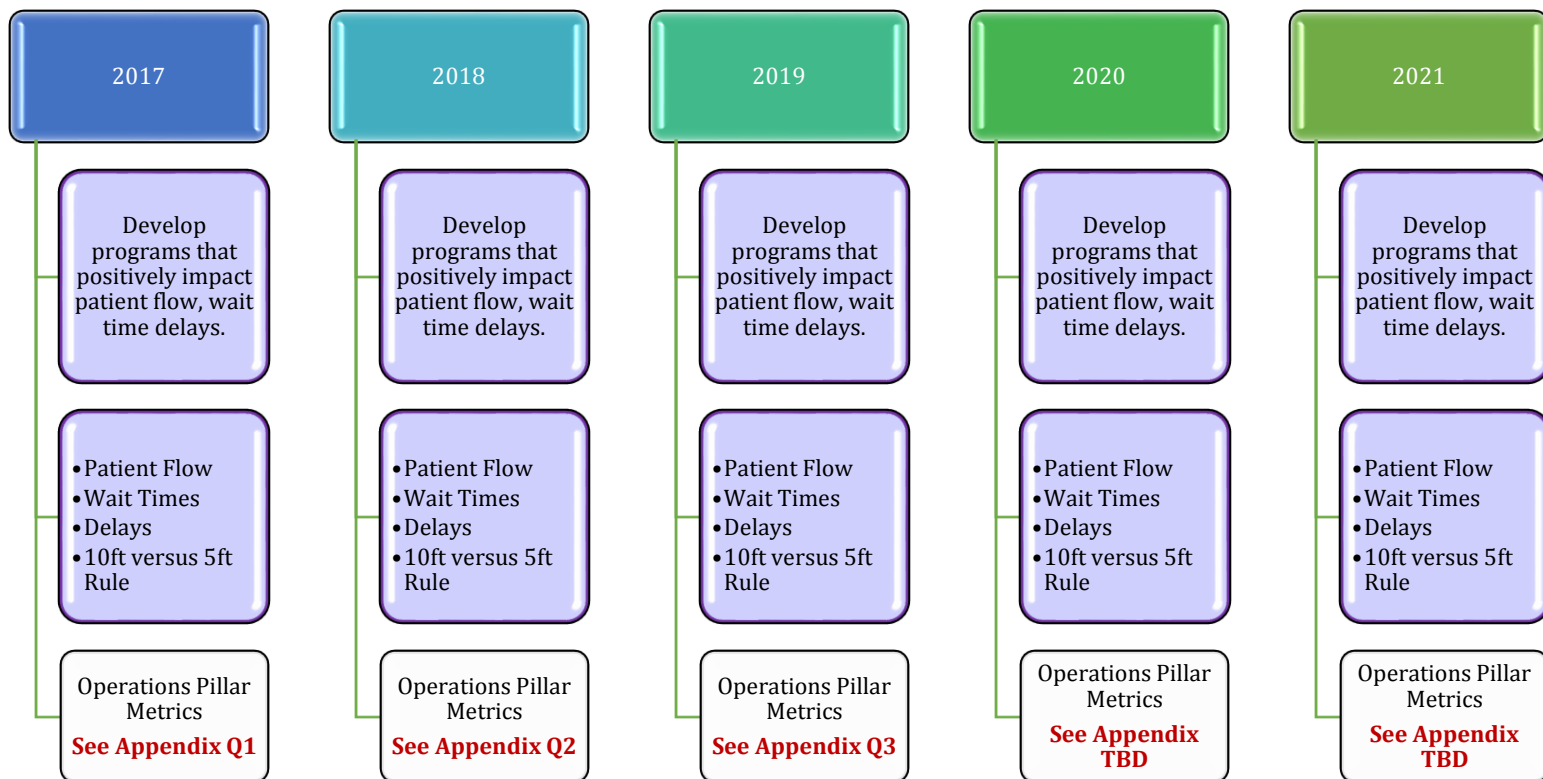
Service

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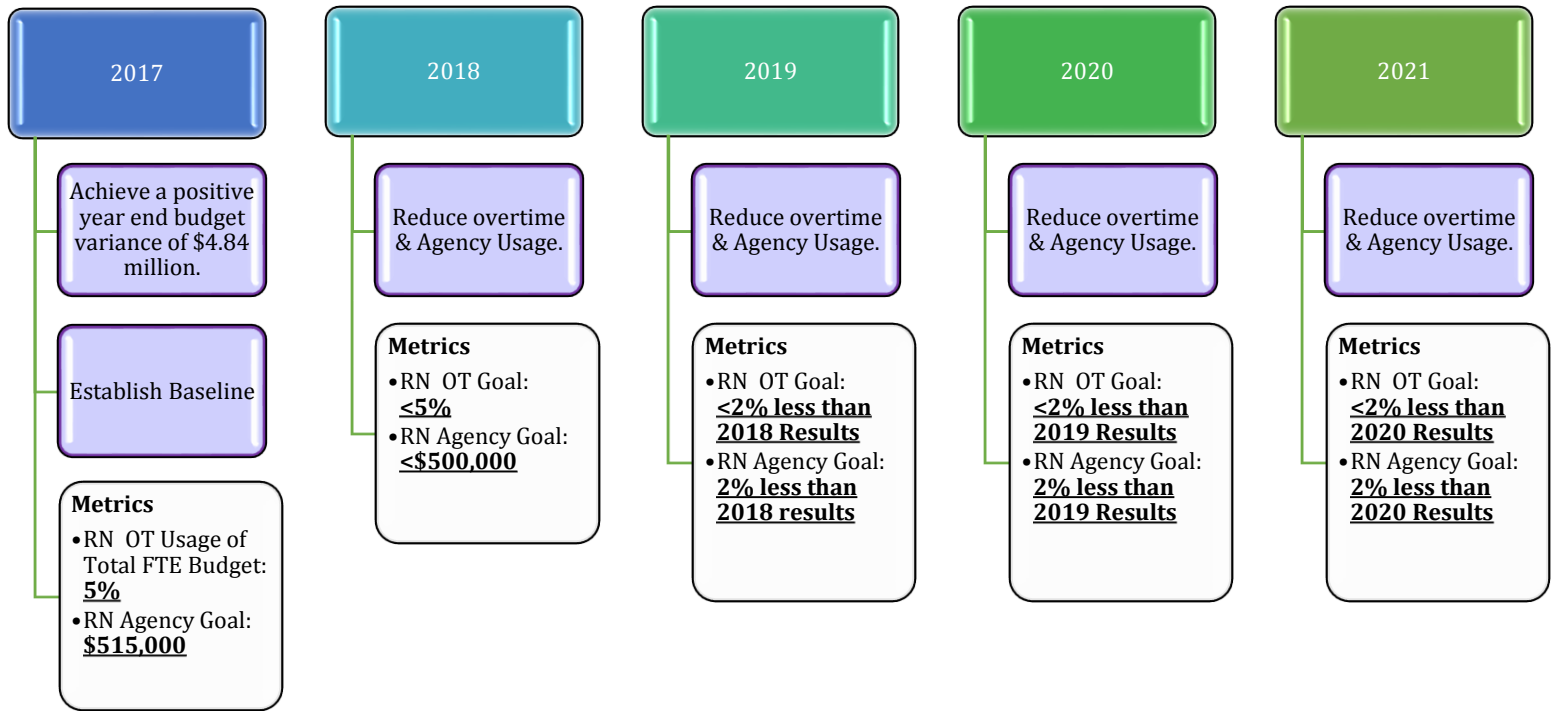
Efficiency

GOAL: Develop transformational leaders at all levels who motivate, inspire and challenge their teams to deliver experiences our patients and customer desire.



Finance

GOAL: Optimize the provision of quality care by assuring effective fiscal management.



STEPS TO PREPARE FOR SITE VISIT

Relish in the accomplishments of your unit as well as the entire hospital:

- ✓ Review this 2020 Magnet® Site Visit Guide for reference
- ✓ Visit the Nursing Website.
- ✓ Become familiar with the Magnet® Documents *
- ✓ Attend any educational activities
- ✓ Review information posted on your unit

Know where your data is displayed on your unit and have an understanding of how to speak to it:

- ✓ NDNQI RN Survey was taken in June 2019. Review your results and action plans
- ✓ Review your unit level dashboard. Understanding of the benchmark - "We outperform the benchmark..."

The Site Visit

- ✓ Appraisers verify the written examples
- ✓ Appraisers meet with:
 - Clinical nurses
 - Interdisciplinary teams
 - Community partners/stakeholders
 - Executive team
- ✓ Validate enculturation of Magnet principles throughout the organization where nursing is practiced

The Site Visit will be held virtually from 8/19/20 - 8/21/20:

- ✓ When you meet a magnet appraiser, introduce yourself, share your credentials, years of experience,... why you love working at Phelps Hospital
- ✓ **IT'S OK TO BRAG!** This is a wonderful opportunity to share what you are most proud of as well as ask questions of the appraisers.

* Two ways to access the Magnet® Documents

1. Direct link to the site:



<https://phelpsmagnet-employees.org/>

- Username: Employees
- Password: PHMagnet20

2. From the Nursing Website,

Click on the About Page and click on

"Phelps Magnet Document"

Helpful Hint - Save the Magnet® Document to your favorites page for easy access



Magnet resources available to you:

- ❖ Judy Dillworth, PhD, RN, CCRN-K, NEA-BC, FCCM, Magnet Program Director, at x3509 or jdillworth@northwell.edu
- ❖ Kathy Calabro, Magnet Data Analyst, at x3508 or kcalabro@northwell.edu

The following pages reflect the innovative stories from your unit or division highlighted in the Magnet® Document. Enjoy and take pride in your accomplishments!



THE SITE VISIT IS YOUR TIME TO ...SHINE!



TL1 - ORGANIZATION MISSION STATEMENT

NURSES CREATE NEW NURSING PRACTICE THAT ALIGNS WITH PHELP'S MISSION STATEMENT

Provide one example, with supporting evidence, of an initiative in nursing practice that is consistent with the organization's mission statement. Provide a copy of the organization's mission statement as one of the supporting documents.

Background

Overview: In 2016, nurse leaders at Phelps Hospital (Phelps) were challenged to find experienced perioperative nurses to fill current and anticipated operating room (OR) nurse positions. The increased demand for OR nurses emerged out of perioperative service line growth, increased surgical patient volume, anticipated nurse retirements and a concern about the increasing stress on the existing staff. The OR nurses were complaining that they were "working for extended periods without breaks," "had difficulty scheduling vacations" due to minimal coverage and were frequently asked "to work overtime." With an inadequate number of qualified nurses to meet the increasing complexity and demand, Kathleen Scherf, MPA, BSN, RN, NEA-BC, CAPA, director, Surgical Services, was concerned that surgeries would be delayed and/or canceled, thereby jeopardizing the hospital's ability to maintain excellence in care and support the hospital's mission. Concurrently, nurse leaders of the Northwell Health System were developing a Perioperative Fellowship Program, using the core curriculum of the Association of periOperative Registered Nurses (AORN) Periop 101 Program as a guide to address the shortage of OR nurses across the Northwell Health System (Northwell).

Nursing Practice Initiative: Before the Perioperative Fellowship Program, nurses were required to have at least one year of OR experience to be considered for hire within the department of Surgical Services at Phelps. The goals of the Perioperative Fellowship Program were to 1) recruit, educate and retain nurses, including new graduate and inexperienced nurses, 2) enhance the personal and professional excellence of the Phelps' staff, with an orientation program specific to the needs of perioperative nursing, 3) sustain an environment of excellence where services are delivered proficiently, efficiently and effectively, and 4)

expand the range and availability of services at Phelps to improve the health of the community we serve.

Mission Statement: Phelps Hospital employees are devoted to the mission of:

- Improving the health of our community through education, partnerships and advocacy – regardless of the ability to pay
- Sustaining an environment of excellence and compassion where medical, social and rehabilitative services are delivered efficiently and effectively
- Educating our community and the professionals that work here to achieve optimal health outcomes and quality of life
- Striving to advance the professional excellence of our healthcare and support professionals, as well as our research initiatives
- Providing quality, comprehensive care in a safe, modern environment where advanced medical techniques and effective management are combined to provide an indispensable community health resource

[TL1-A Community Service Plan 2014-2016 pg. 3](#)

Aligning Nursing Practice with Mission Statement: By creating this new program, Phelps demonstrated a commitment to its mission statement by ensuring the Perioperative area would have an appropriate supply of nurses prepared to deliver care that achieves optimal health outcomes and quality of life. In addition, this program strives to advance the professional excellence of our healthcare and support our nurses.

Designing the Change in Nursing Practice

Evaluating Current Processes: In June 2016, Kathleen met with Lorraine (Lorrie) Presby, BA, RN, CNOR, CRCST, nurse educator, to identify strategies for the recruitment and retention of OR nurses to Phelps. As they were both members of AORN, Kathleen and Lorrie reviewed AORN's Periop 101 curriculum and spoke with their Northwell Health System colleagues to understand how Northwell was addressing this national issue.

Identifying Solutions: Diana Lopez-Zang, RN, CNOR, director, System Perioperative Education, Northwell Health, offered to meet with Lorrie and Kathleen regarding the inclusion of Phelps and Northern Westchester in Northwell Health's Perioperative Fellowship Program. Its first session had begun in May 2016, with a plan to have four fellowships per year. This program incorporated the 25 modules from AORN's Periop 101 course and 25 additional modules created by the Northwell Health System into an intensive 6-week structured program of blended (didactic and simulation) learning. The program examined the multiple roles of the perioperative nurse and the phases of the perioperative nursing process. Experiential learning occurred at the individual hospital sites for the remainder of the fellowship period.

Lorrie and Kathleen were interested in implementing this program at Phelps. They agreed that to ensure a successful program for the “OR fellows,” based on the number of available preceptors, a maximum of four RNs could realistically participate in Northwell Health’s Perioperative Fellowship Program at one time. Lorrie and Kathleen decided to coordinate one Perioperative Fellowship cohort per year at Phelps to ensure the OR fellows were provided with an effective, comprehensive education with the appropriate support. Lorrie remained in contact with Diana to secure “seats” or positions for Phelps’ nurses in Northwell Health’s Perioperative Fellowship Program. On July 21, 2016, Kathleen emailed Mary McDermott, MSN, RN, APRN, NEA-BC, senior vice president, Patient Care Services and chief nursing officer, that Phelps had four “seats” in the program. [TL1-B Scherf-McDermott Emails July 2016](#)

Customizing the Program: Northwell’s Perioperative Fellowship is a year-long program that helps new graduate nurses attain and maintain the knowledge, skills and attitudes needed to provide safe care to patients and families and successfully navigate through the first year as a registered nurse in the OR. The program requires on-site classroom education at Northwell, as well as completion of online learning modules maintained in iLearn, the Northwell intranet educational site. Lorrie developed an individualized blended learning plan/schedule for the OR fellows at Phelps. Lorrie facilitated the OR fellows’ participation in various workshops and simulations at Northwell Health while incorporating didactic classroom sessions and guided OR experiences at Phelps, tailored to the lessons learned. [TL1-C Phelps Periop Fellowship Educator Grid Nov 2016](#)

Kathleen and Lorrie modified the eligibility criteria to include new RN graduates and experienced nurses without OR experience interested in the OR. Kathleen and Lorrie formed an OR selection team to assess the prospective nurse candidate’s attention to detail, ability to stay focused under stress and organizational skills. The OR selection team designed questions to assess the applicant’s potential to succeed in Northwell Health’s Perioperative Fellowship Program and ultimately as members of the Phelps Perioperative Team.

Implementing New Nursing Practice: On October 31, 2016, the Phelps OR Fellowship Program was launched as a one-year program with specialized education in intraoperative care through a six-week, didactic, clinical observation, hands-on workshop portion followed by 46 weeks of supervised (preceptor-guided) OR education at Phelps. Since its start, there have been four cohorts of OR fellows in the Phelps OR Fellowship Program. [TL1-D Newsletter Article in Notebook 012320](#)



TL2EO - NURSING STRATEGIC PLAN

REDUCING HOSPITAL-ACQUIRED C. DIFFICILE INFECTIONS

Provide one example, with supporting evidence, of an improved patient outcome associated with a goal of the nursing strategic plan. Provide a copy of the nursing strategic plan.

Problem

Overview: The Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) is the nation's most widely used healthcare-associated infection tracking system. NHSN utilizes a standardized infection ratio (SIR) as the primary measure to track healthcare-associated infections (HAIs), including *Clostridioides difficile* (C. diff), at a national, state and facility level. SIR compares the actual number of HAIs at each hospital to the predicted number of infections (CDC, 2019). Hospital-acquired C. diff infection (CDI) is among the HAIs tracked by NHSN, which has set a national benchmark for CDI SIR to remain under 0.9. Hospital CDI SIR is also provided to the Centers for Medicare & Medicaid Services (CMS) through the Hospital Inpatient Quality Reporting (IQR) program and the Hospital Outpatient Quality Reporting (OQR) program.

Background: In the first quarter of 2018, there were six cases of CDI at Phelps Hospital (Phelps), equating to a 0.90 CDI SIR. Meredith Shellner, BSN, MS, RN, CIC, interim director, Infection Control, was concerned with the number of CDIs, and presented the issue to nurse leaders and clinical nurses. In addition, Alex Xelas, MSN, RN, CIC, was hired as the permanent director of Infection Control. Working together, Alex and Meredith placed CDI as a priority project in line with Phelps' Nursing Strategic Plan.

Connecting to the Nursing Strategic Plan: In the Phelps' Nursing Strategic Plan for 2017-2021, the Quality goal was to, "Foster an evolving culture of safety through evidence-based nursing practice that cultivates learning and promotes innovation across the continuum of care" (p. 13). Under this goal, one objective was to "Monitor patient care services dashboard for Quality of Care," with C difficile/CDI SIR identified as a measure of success. [TL2EO-A Phelps' Nursing Strategic Plan 2017-2021, p. 13](#)

Challenge: In 1Q18, the Phelps CDI SIR was 0.90.

Goal Statement

Goal: Reduce Phelps CDI SIR to below the NHSN benchmark of 0.90 SIR.

Measure of Effectiveness: Phelps CDI SIR as calculated by NHSN.

Participation

TL2EO - Table 1 - C. Difficile Task Force

Name	Credentials	Discipline	Department/Unit	Job Title
Alex Xelas	MSN, RN	Nursing	Infection Control	Director
Meredith Shellner	BSN, MS, RN, CIC	Nursing	Infection Control	Interim Director (at the time)
Helen Renck	MSN, RN, CJCP, CPPS	Clinical Operations	Administration	Vice President/ Patient Safety Officer
Mary McDermott	MSN, RN, APRN, NEA-BC	Patient Care Services	Administration	SVP Patient Care Services/ CNO
Mario Pensabene		Facility Services	Environmental Services	Director
Antonio Acosta		Facility Services	Environmental Services	Assistant Director

Interventions

Focusing on CDI Reduction: In April 2018, a subcommittee of the Infection Prevention and Control Committee, was tasked with reviewing the Northwell System's C. diff bundle to assure all the elements were in place and aligned with the Phelps Nursing Strategic Plan's focus on Quality of Care. The C. Difficile Task Force focused on new interventions to reduce the CDI SIR at Phelps, aligned with the Nursing Strategic Plan's focus on Quality of Care. The subcommittee was led by Helen Renck, MSN, RN, CJCP, CPPS, vice president, Clinical Operations & Patient Safety Officer.

Identifying Evidence-Based Practices: In April 2018, the Northwell Health System wide initiative for personal protective equipment (PPE) was introduced to Phelps with cleaning practices as part of the system-wide bundle.

Adding Evidence-Based PPE: In April 2018, Alex coordinated hospital-wide distribution of impervious disposable yellow gowns with reinforcement of PPE policies and compliance. Prior to this, gowns were made of the same reusable material as patient gowns. Alex educated the clinical nurse specialists and nurse educators on how to don and doff the gowns, who in turn instructed the staff, including nurses, and verified their competency in donning and doffing. The clinical nurse specialists and educators continue to educate the nursing staff during yearly competency, through observation and just in time 1:1 instruction.

Implementing New Technology to Reduce C.diff: In May 2018, task force members Mario Pensabene, director, Environmental Services, and Antonio Acosta, assistant director,

Environmental Services, implemented the Xenex[®] Robot, a robot that produces germicidal UV light at all wavelengths. The broad-spectrum UV light incorporates all germicidal wavelengths including those that de-activate the DNA and RNA of microorganisms. It has the capability of killing multidrug-resistant organisms (MDRO) including C. diff. The Xenex[®] company presented policies and procedures that Phelps modified and adopted with minor changes. The Xenex[®] Robot was used daily to clean all procedure rooms, including the operating rooms. It has also been used to clean patient rooms upon discharge, regardless of whether C.diff was identified in that room.

Developing New CDI Surveillance Processes: In May 2018, Alex initiated surveillance monitoring of all C. diff patient infections through a daily order report. This report alerts the Infection Prevention department whenever orders to rule out or confirm C. diff. are entered by the provider. As a result, members of the Infection Prevention department can review the order and medical record for appropriateness in real time. Also in May, Alex and Meredith initiated a root cause analysis (RCA) process to review all cases of hospital-onset CDI to determine any trends. During an RCA, Alex and/or members of the infection prevention department meet with the nursing staff of the unit where the infection occurred. At the RCA, the team reviews the orders for appropriateness, timeframe, and any trends with the staff in attendance. These RCAs are used as a fact-finding exercise and an educational moment for the staff. With this added knowledge and enhanced awareness, nurses are more pro-active in taking measures to reduce CDI.

Developing/Updating Nursing Practice to Reduce CDI: Also in May 2018, Alex and Meredith initiated monitoring to evaluate nurses' adherence to the Diarrhea Decision Tree (DDT) and necessity of orders for testing. The DDT is an easy to follow algorithm which is part of the Northwell System's C. diff. bundle and includes reasons for diarrhea (e.g. laxatives, bowel preps) to distinguish whether testing is required, based on the cause of the diarrhea. The DDT is used at admission, if there is active diarrhea with concern for infectious diarrhea and whenever a patient has diarrhea equal to or greater than three loose stools within a 24-hour period. The DDT also provides guidance regarding the appropriate treatment, based on the results of the test. Alex and Meredith provided 1:1 education on the DDT and educated the nurses during unit staff meetings. They also worked with Dr. Blaufeux, chief medical information officer (CMIO) to review and revise the physician order sets to facilitate the appropriate order entry for C. diff. testing. Alex and Meredith reviewed the documentation, including isolation precautions and met with nurses and physicians as needed.

Educating Colleagues on New Cleaning Practices: Starting in May 2018, Alex and Mario held monthly meetings with environmental services staff to discuss and reinforce cleaning practices, including the use of adenosine triphosphate (ATP) environmental testing to identify microorganisms following cleaning. Alex and Mario emphasized cleaning practices and terminal cleaning techniques. Unit-based education was also conducted by Alex and Antonio

on two consecutive days to reach as many staff as possible. Alex and Antonio visited every nursing unit to review the current practice and introduce the Xenex[®] Robot. Alex and members of the Infection Prevention department continue to provide ongoing education, whenever there are questions or concerns.

Implementing New Practices to Reduce CDI: The new practices to reduce CDI were fully implemented at Phelps in May 2018.

Outcome

Pre-Intervention Timeframe: 1Q18

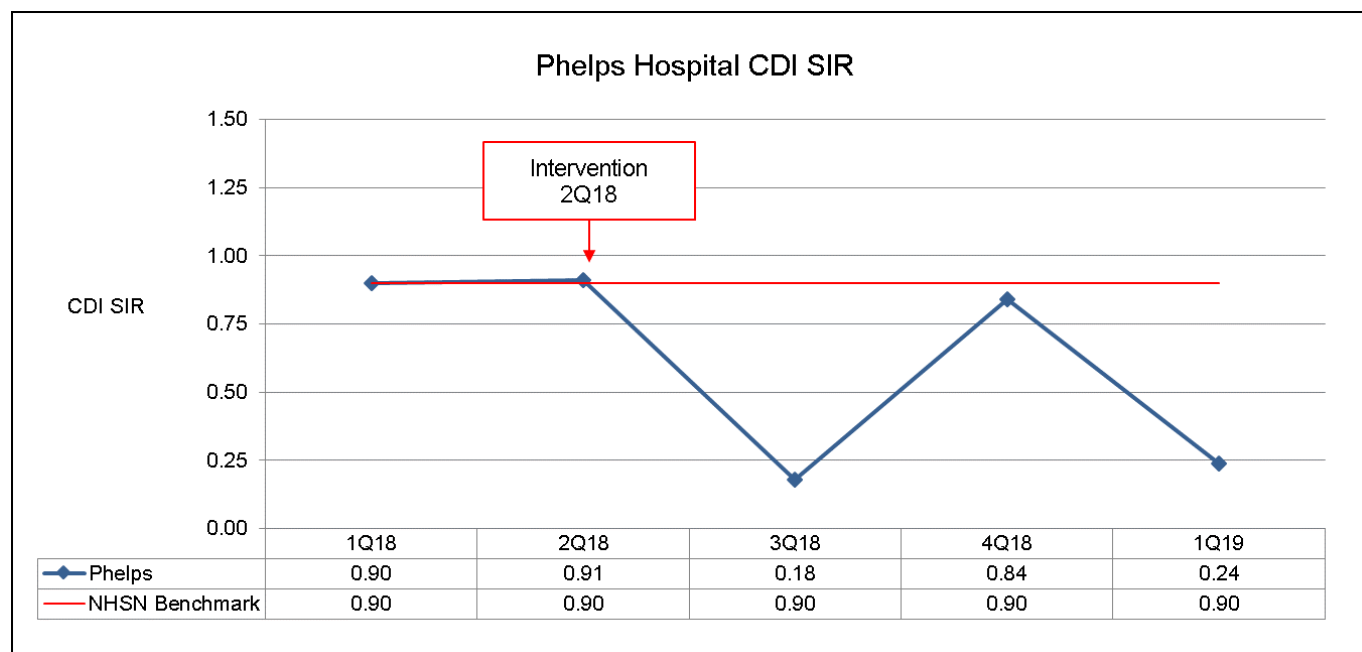
Pre-Intervention Baseline Data: During the pre-intervention timeframe, the Phelps CDI SIR was 0.90.

Intervention Timeframe: 2Q18

Post-Intervention Timeframe: 3Q18 - 1Q19

Post-Intervention Data: During the post-intervention timeframe, the Phelps CDI SIR averaged **0.42**. This represents **53%** reduction in the CDI SIR, and is lower (better) than the NHSN benchmark.

TL2EO - Graph 1 - Phelps CDI SIR





SE13 - RECOGNIZING INTERPROFESSIONAL TEAM

PHELPS HOSPITAL RECOGNIZES C.A.R.E. LEADER TEAM

Provide one example, with supporting evidence, of the organization's recognition of an interprofessional group (inclusive of nursing) for their contribution(s) in influencing the clinical care of patients.

Background

Overview: Healthcare facilities that incorporate interprofessional cooperation into practice and operations have fewer preventable medical errors, better patient outcomes, and reduced health care costs (Nester J. "The Importance of Interprofessional Practice and Education in the Era of Accountable Care." *North Carolina Medical Journal*, March-April 2016). Interprofessional collaboration also leads to improved working relationships among the different health care disciplines.

Recognition: C.A.R.E. Leader team meetings have been recognized through a variety of venues: 1) the Senior Leadership team recommended the Care Leader Team as a best practice at the "Every Moment Matters" patient experience conference hosted by Northwell Health (January 2019), 2) in the Phelps Hospital (Phelps) employee newsletter (May 2019), 3) at a Management Meeting conducted by Senior Leaders (September 2019), 4) at Phelps Town Hall meetings (October 2019), and 5) at a recognition breakfast (December 2019).

Interprofessional Team: In early 2016, Daniel (Dan) Blum, MS, president and chief executive officer, Phelps Hospital, established the C.A.R.E. Leader team, an interprofessional group of individuals focused on working together to optimize patient care outcomes and improve patients' experiences. C.A.R.E, an acronym for Connect, Awareness, Respect and Empathy, provides the central elements of communication at Phelps. The C.A.R.E team, co-chaired by Mary McDermott, MSN, RN, APRN, NEA-BC, senior vice-president, Patient Care Services and chief nursing officer and Dan, is composed of leaders from the departments of Nursing, Radiology, Finance, Administration, Admissions, Physician Practices, Respiratory Therapy, Outpatient Cardiovascular, Wound Healing, the Cancer Institute, Housekeeping, Food and Nutritional Services, Case Management, Patient Experience, Internal

Communications, Development, Security, Engineering, Safety, and Risk Management.

Interprofessional Team's Actions: Since 2016, C.A.R.E. Leaders from every inpatient and ambulatory unit and/or department have met weekly to review and collectively address patient experience issues identified from the patient comments reports from the Medicare Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) and Press Ganey surveys, patient letters, written correspondence, one-on-one meetings and telephone calls from patients. Positive, negative and neutral comments are posted on a screen for C.A.R.E team members to read and provide feedback, while the responsible unit and/or department leaders share the response/intervention taken regarding the comment (e.g., acknowledge the people who were identified as positive, elicit suggestions for individual, unit or system improvement).

How Actions Influenced Clinical Care: C.A.R.E Leader team meetings have heightened the awareness of Phelps employees' understanding of the importance of working "cooperatively together" to optimize patient care. Through the responsiveness of the C.A.R.E. Leader team, patients recognize that Phelps is listening to their concerns, interested and serious about correcting issues. Improved patient care outcomes have been achieved as evidenced by the reduction in the number of complaints regarding inconsistency in breastfeeding information and the temperature of the ED, respectively.

Participation

SE13 - Table 1 - C.A.R.E. Leader Team

Name	Credentials	Discipline	Unit/Dept.	Job Title
Daniel Blum	MS	Administration	Administration	President, CEO
Tobe Banc	MD	Medicine	Administration	Medical Director
Mary McDermott	MSN, RN, APRN, NEA-BC	Patient Care Services	Administration	SVP Patient Care Services/ CNO
Eileen Egan	JD, BSN, RN	Risk Management	Administration	Vice President
Tracy Feiertag	MS, DHA	Administration	Service Lines, Physician Practices	VP, Service Lines and Physician Practices
Robbins Gottlock	MD, MBA	Physician Practices	Administration	VP, Associate Medical Director
William (Bill) Reifer	LCSW	Quality, Case Management	Quality, Case Management, Patient Experience, Internal Communications, Religious Services	VP, Quality and Case Management

Helen Renck	MSN, RN, CJCP, CPPS	Clinical Operations	Administration	Vice President/ Patient Safety Officer
Jill Scilibilia	CFRE	Development	Development	Vice president
Glen Taylor		Support Services	Administration	VP, Support Services
Tony Acosta		Environmental Services	Environmental Services	Assistant Director
Susanna Airey	BSN, RN, OCN	Nursing	Endoscopy	Nurse Manager
Brian Akers		Facilities	Plant Operations Management	Assistant Director, Facilities Management
Melanie Anderson		Administration	Administration	Senior Executive Assistant
Katrina Aronoff		Radiation Medicine	Northwell Health Cancer Institute	Chief Radiation Therapist
Ingrid Arzeno		Physician Practices	Physician Practices	Practice Administration Manager
Neal Browne		IT Communications	Information Services	Site Director
Manny Caixeiro		Support Services	Security	Director
Kimorine Campbell		Physician Practices	Physician Practices	Manager
Carol Daley	MSN, RN, CNML	Nursing	ICU	Nurse Manager
Alayna Davis	BSN, RN, PCCN	Nursing	ED	Nurse Manager
Rona Edwards	MSN, RN-BC	Nursing	Behavioral Rehab Units	Nurse Manager
Melissa Eisele- Kaplan	MSW, LCSW, CPXP	Social Work	Patient Experience	Program Coordinator
Patty Espinoza		Patient Access, Admissions	Admitting	Director, Revenue Cycle Management
Nancy Fox	MS, RN, NEA- BC, NPD-BC, CNML	Education	Organizational Development	Director
Cherry Lyn Fuentes	MS, RN-BC, NPD-BC	Education	Organizational Development	Education Specialist
George Gattullo		Plant Operations Management	Engineering	Director, Facilities Management
Barry Geller	MD	Emergency Medicine	Emergency Department	Director
Michael Glennon		Radiology Diagnostic	Radiology	Senior Administrative Director

JoAnn Greene		Surgical Services	Surgical Services – operating Room	Director
Carol Greiner	MSW, LCSW	Social Work	Northwell Health Cancer Institute	Social Worker
Francesca Grillo	MSN, RN, C-EFM	Nursing	Maternal Child Health	Clinical Educator
Jane Hearty	BSN, RN	Nursing	Infusion Center	Nurse Navigator
Andrea Hodges		Support Services	Food/Nutritional Services, Hospitality, Transport, Guest Services	Assistant Director
Candace Huggins	MSN, RN, NEA-BC, CEN	Nursing	Emergency Department	Assistant Director
Paula Keenan	MSN, MPH, RN	Nursing	Medical Surgical Services	Nursing Director
Kerry Kelly	BSN, RN, CNM	Case Management	Case Management, Physician Services	Director
Michelle Kowack		Physician Practices	Physician Practices	Practice Administration Manager
Lauture-Jerome, Yve	MAS, BSN, RN, SANE- A	Nursing	Maternal Child Health	Nursing Director
James Lindey			ED	
Pam Lipperman	MSW	Social Work	Volunteers	Director
Amara Lynch	MSN, RN, FNP-BC	Nursing	Radiation Medicine	Nurse Practitioner
Pamela Louis	MSHP	Nursing	Wound Healing Institute	Director
Maureen Lovett	BSN, RN	Nursing	Surgical Services	Assistant Director
Neha Makhijani	RVI, MPA	Clinical Operations	Cardiovascular Diagnostics Lab	Manager
Maria Malacarne		Admitting	Financial Counseling	Supervisor
Marilyn Maniscalco	BSN, RN, CNML	Nursing	2 Center	Nurse Manager
Janice Marafioti	BSN, RN, ONC	Nursing	Infusion Center	Acting Nurse Manager
Suzanne Mateo	MA, RN, NEA-BC	Nursing	Emergency Department, Critical Care & Inpatient Behavioral Health	Nursing Director
James McCullagh		Administration	Finance	Associate Director, Finance, Multi-Site

Brian McGrinder	RPh	Pharmacy	Pharmacy	Director, Pharmacy and Clinical Services
Megan McNutt	MBA, MHA	Emergency Department	ED	Administrative Director
Danielle Medina	BSN, RN-BC	Nursing	5 North	Assistant Nursing Manager
Jonathan Monsen		Physician Practices	Physician Practices	Practice Administration Manager
Patrizia Musilli		Human Resources	Human Resources	Director
Andrew Notaro		Northwell Health Cancer Institute	Oncology	Administrative Manager
Ellen Parise	MSN, RN, CNML	Nursing	3 North (FKA 2 North)/Vascular Access Team	Nurse Manager
Dominic Paruta		Physician Practices	Physician Practices	Senior Administrative Manager
Joy Paul- Bhatnager	MSN, RN, OCN, CCGRN	Nursing	Infusion Center	Nurse Manager
Mario Pensabene		Environmental Services	Environmental Services	Director, Environmental Services
Nancy Perkins	BSN, MS, MPA, RN	Nursing	1 South	Nurse Manager
Carol Pileggi	BS, MT(ASCP), SLS	Laboratory	Lab	Administrative Director
Debbie Pirchio		Medical Records	HIM	Director, Revenue Cycle Management
Margaret Plofchan	RD	Marketing and Public Relations	Marketing and Public Relations	Director
Elena Rivera		Physician Practices	Physician Practices	Practice Administration Manager
Carol Robinson	CDN	Internal Communications	Patient Experience	Coordinator, Internal Communications
Kathleen Scherf	MPA, BSN, RN, NEA-BC, CAPA	Nursing	Surgical Services	Nursing Director
Edwin Serrano		Physician Practices	Physician Practices	Practice Administration Manager
Biagio Siniscalchi	BS, RT, CU, MRSO	Radiology Diagnostics	Radiology	Assistant Director
Donisha Sledge	BSN, RN, CEN	Nursing	ED	Assistant Nurse Manager

Alaina Smalley	MSN, RN	Nursing	PACU/ASU	Nurse Manager
Carol Stanley		Laboratory	Lab	Assistant Director
Krista Tamny		Physician Practices	Physician Practices	Practice Administration Manager
Julissa Vargas		Physician Practices	Physician Practices	Senior Administrative Manager
Nelly Vega-Woo	DNP, RN, FNP-BC	Nursing	Infusion Center	Nurse Practitioner
Barbara Vetoulis	BSN, RN, CNML	Nursing	5 North	Nurse Manager
Phyllis Vonderheide	MS, RN-BC	Quality	Patient Experience	Senior Director
Tim Wages	MSN, RN, NE-BC	Nursing	Hyperbaric, Respiratory, Sleep and Cardiovascular	Sr. Administrative Director
Gail Wilson	MHA, BSN, RN	Nursing	5 South	Nurse Manager
Darron Woodley		Support Services	Food & Nutrition Services	Manager

Recognizing Interprofessional Team for Contributions to Clinical Care

C.A.R.E. Leader Team Informational Poster presented at *Every Moment Matters*, Northwell Health System Conference - April 9, 2019.

During a Phelps senior staff meeting, William (Bill) Reifer, LCSW, vice-president, Quality, and Phyllis Vonderheide, MS, RN-BC, senior director, Patient Experience, suggested that Phelps submit a poster entitled “*C.A.R.E. Leader Meeting – A Dynamic Team-oriented Approach to Patient Feedback*” as an exemplar for the Northwell Health System annual patient experience conference. The senior leaders approved the requested submission. The *C.A.R.E. Leader team* initiative was submitted to Northwell by Phyllis and Mary in December 2019. They reported on the progress of the submission at the Senior Staff meeting in January 2019.

[SE13- A Senior Leader Minutes 112818 – 011519.](#)

In March 2019, Phyllis prepared a final draft of the poster, highlighting the contributions of the C.A.R.E. leader team, which was accepted by Northwell Health. The poster included the C.A.R.E Leader team’s background, benefits, and two success stories. Phelps Hospital was added to Northwell Health’s list of hospitals that were presenting at the conference. On April 9, 2019, members of the Senior staff, Mary, Tobe Banc, MD, Senior Vice-President, Medical Director, Jill Scibilia, Vice-President, Development, and Bill attended the “*Every Moment Matters*” Conference, with approximately 650 attendees, to support Phyllis and recognize the C.A.R.E. leader team for their contributions in influencing the clinical care of patients at

Phelps.

During the C.A.R.E Leader team following the conference, Phyllis, Tobe, Jill and Bill recognized the C.A.R.E Leader team for their contribution to Phelps and Northwell Health. They provided feedback to the C.A.R.E Leader team that the poster was well received. They shared that numerous hospital members were inquiring about the methodology used to create this program because they wanted to replicate the program, with the interprofessional teams within their facilities to improve patient experience outcomes.

Recognition in Hospital Publication: In May 2019, Dan acknowledged some of the achievements of the C.A.R.E. Leader team in the Phelps employee newsletter, *Notebook*, in an article entitled, "The C.A.R.E. Leader Team – Enhancing Patient Care Excellence through Inter-Professional Cooperation." Dan recognized the C.A.R.E. Leader team's contributions successes including greater diversity in food selections, enhanced consistency in the presentation of breastfeeding information, a more collaborative approach to maintaining hospital cleanliness, and the systematization of blanket deliveries to patients in the ED. [SE13-B Phelps Hospital Notebook Article 041819](#).

Recognition in Management Meeting: On September 12, 2019, The C.A.R.E. Leader's Team was recognized by Senior Leaders for its contributions in influencing the clinical care of patients at the monthly Management Meeting. Phyllis presented the most recent Press Ganey data and acknowledged the efforts of the C.A.R.E. Leader team in improving and sustaining these outcomes. Some of the initiatives mentioned included the Breastfeeding Improvement Program and the Welcome Blanket Program. Following Phyllis' presentation, Dan reiterated the value of the Care Leader team and thanked them for their ongoing efforts. [SE13-C Management-Meeting-Minutes-091219](#).

Recognition at Town Hall Meetings: During the October 2019 Town Hall meetings, Dan recognized the C.A.R.E Leader team for providing oversight and influence on their respective staff to address patient concerns in a systematic way and, subsequently, contribute to improved patient outcomes. Town Hall meetings provide the venue for all Phelps employees to hear about recent accomplishments and future directions of the hospital. During the meetings, Dan and others presented data from the Press Ganey patient care survey comment reports. Dan highlighted the contributions of the C.A.R.E Leader team by providing two examples of initiatives recommended by the C.A.R.E Leader team to resolve patient concerns. [SE13-D-TownHall-Slide13-1019](#).

Recognition at Special Breakfast CARE Leader Meetings: In December 2019, C.A.R.E Leader team members were invited to a special breakfast recognition by the Phelps Hospital Administration recognized the C.A.R.E Leader team for their contributions to improving the patient experience over the past year. [SE13-E-CARELeader-BreakfastRecognition](#).



EP8EO - RN-LED INTERPROFESSIONAL EDUCATION

REDUCING OB HEMORRHAGE PATIENT LENGTH OF STAY

Provide one example, with supporting evidence, of an improved patient outcome associated with an interprofessional education activity, led or co-led by a nurse (exclusive of the CNO).

Problem

Overview: Postpartum hemorrhage continues to be a global health concern, associated with increased hospital length of stay, morbidity and mortality.

Background: In April 2017, a patient on the Maternal Child Health (MCH) unit at Phelps Hospital (Phelps) experienced an obstetric hemorrhage that advanced to a massive blood transfusion (MBT), cardiovascular collapse, and transfer to the intensive care unit (ICU). Following a debrief of the event and required MBT, the MCH team recognized that policy changes, education, and expedited response time of blood products were needed. The MCH team mobilized and coordinated drills on April 20, 2017, and May 31, 2017, regarding estimated blood loss, early recognition of postpartum hemorrhage, and simulation of transporting the patient on a stretcher to the Operating Room. The OB providers, nurses, anesthesia, safety officer, and nurse educator were all involved in both drills. These simulations incorporated the American College of Obstetricians and Gynecologists (ACOG) Safe Motherhood Initiative Bundle on Maternal Hemorrhage, and included use of a mannequin, visual pictures of estimates of blood loss and prompts to recognize the stages of OB hemorrhage. However, a subsequent MBT event pointed to the need for policy changes and additional interprofessional education beyond what the simulations provided.

Challenge: In April 2017, the length of stay (LOS) for Phelps OB patients requiring MBT was 21 days. There were no MBT events in May 2017.

Goal Statement

Goal: Reduce LOS for Phelps OB patients requiring MBTs.

Measure of Effectiveness: Average LOS, in days, for Phelps OB patients requiring MBTs

(Only months with patients experiencing MBT events are included in the calculation).

Participation

EP8EO - Table 1 - Participants with new MBT policy and education plan

Name	Credentials	Discipline	Dept/Unit	Job Title
Dorit Lubeck Walsh	MSN, RN, FNP-BC, C-EFM	Nursing	Maternal Child Health	Clinical Nurse
Danielle Rush	BSN, RN, C-EFM	Nursing	Maternal Child Health	Clinical Nurse
Mona Maloney	MSN, RNC-OB, C-EFM	Nursing	Maternal Child Health	Clinical Nurse
Adele Whyte	MSN, RN, CCRN, WOCN	Nursing	ICU	Clinical Nurse
Kara Giustino	MSN, RN, CPNP, IBCLC	Nursing	Maternal Child Health	Clinical Educator
Cheryl Burke	MSN, MBA, RN-BC, WCC	Nursing	Medical Surgical	Clinical Educator
Young, Carolynn	MSN, RN-BC, CNS-BC	Nursing	Medical Surgical	Clinical Nurse Specialist
Santos, Margaret	MSN, RN, ACNS-BC, CCRN	Nursing	Surgical Services	Clinical Nurse Specialist
Wall, Doreen	MSN, RN-BC	Nursing	Behavioral Health	Clinical Educator
Lorraine Presby	RN, CNOR	Nursing	OR	Clinical Educator
Helen Renck	MSN, RN, CJCP, CPPS	Clinical Operations	Administration	VP/ Patient Safety Officer
Mary McDermott	MSN, RN, APRN, NEA-BC	Patient Care Services	Administration	Senior VP, Patient Care Services/CNO
Eileen Egan	JD, BSN, RN	Risk Management	Administration	Vice President
Carol Pileggi	BS	Laboratory	Lab	Administrative Director
Vijayalaxmi Malavadi	MD	Medicine	Blood Bank	Medical Director of the Blood Bank
Cynthia Pettius		Support Services	Blood Bank	Blood Bank Administrator
Matthew Cullen	MD	Medical	Anesthesia	Director of Medical Anesthesia
Angela Leonard		Support Services	Telecommunications	Director of Telecommunications

Interventions

Identifying Opportunity for Improvement: In June 2017, another OB patient required an MBT that advanced to cardiovascular collapse. This patient only required half the amount of

blood products and her length of stay in the ICU was shorter than the April 2017 patient's LOS. However, upon the review of this case, the MCH team determined that education and policy changes were still needed.

Forming a Team: In June 2017, the MCH clinical nurses Dorit Lubeck-Walsh, MSN, RN, FNP-BC, C-EFM, Mona Maloney, MSN, RNC-OB, C-EFM, and Danielle Rush, BSN, RN, C-EFM, identified that a policy change and more education was needed. They formed a team with Kara Giustino, MSN, RN, CPNP, IBCLC clinical educator, MCH and requested to meet with the blood bank, anesthesia, nursing leadership, and the OB providers, during their monthly meetings. Dorit, Mona, Danielle and Kara made their presence known at every meeting to discuss work flow, obstacles, lessons learned, and identified the change needed to improve patient outcomes. The MCH team collaborated with Cheryl Burke, MSN, MBA, RN-BC, WCC, and Doreen Wall, MSN, RN-BC, clinical educators and Carolyn Young, MSN, RN-BC, CNS-BC, ONC, and Margaret Santos, MSN, RN, ACNS-BC, CCRN, clinical nurse specialists, Eileen Egan, JD, BSN, RN, vice president, Administration, and Helen Renck, MSN, RN, CJCP, CPPS, vice president, Clinical Operations & Patient Safety Officer to collate all the information obtained and generate a policy outlining the steps needed to achieve our goal of early recognition of OB hemorrhage. The creation of a seamless process would shorten the response time and decrease the patient's length of stay.

Identifying Alternate Approaches: In June 2017, the team utilized multiple resources, including the ACOG Safe Motherhood Initiative Bundle, to develop new policies and guidelines for the management of the patient with OB hemorrhage. They networked with the Northwell perinatal network and participated in several multiprofessional meetings to develop a policy that was efficient, feasible and adaptable by Phelps Hospital.

Developing/Revising OB Hemorrhage Policies/Practices: In July 2017, Helen coordinated extensive interprofessional meetings and debriefings with Cheryl, Doreen, Carolyn, Margaret, Eileen, clinical nurses, blood bank staff, physicians, risk management, nursing administration, OB providers, anesthesia, and communications staff of Phelps. The purpose was to finalize a policy that detailed "how to mobilize the hospital" in the event of an OB hemorrhage, an emergency which could happen in MCH or anywhere in the hospital. The new Massive Blood Transfusion policy was constructed to work within a community hospital setting. This policy outlines how many departments of the hospital are mobilized in the event of an MBT. For example, the nurse administrator assigns roles to various individuals throughout the hospital in order to improve efficiency: a med surg technician responds to assist in the blood bank, an employee is designated to be the blood runner between the blood bank and the location of the MBT. Kara collaborated with members of the blood bank to create a process using a new single order form to trigger a standardized and automated response of dispensing specific blood products during an MBT.

Developing Interprofessional Education Activity: In July 2017, Dorit, Kara, Cheryl, Doreen, Carolyn, and Margaret, developed MBT interprofessional education which included:

recognition of the stages of OB hemorrhage, evaluation of maternal risk assessment, how to estimate blood loss, use of the code cart, how to identify differences in maternal cardiac arrest, and use of the rapid blood infuser. This education was constructed as a course module for Healthstream™, an online learning management system available to all departments and during annual nurse competency days.

Leading Interprofessional Education Activity: In July 2017, Dorit, Danielle, Mona, and Kara conducted multiple education sessions during the competency days to focus on the MBT policy and management of patients with OB hemorrhage. The MBT Healthstream™ on-line activity was assigned to employees of the involved disciplines identified in the policy on 8/25/17 and completed by 9/30/17. Within that time frame, 429 employees completed the Healthstream™ on-line education. The chart below reflects the number of employees, by discipline who completed the Healthstream™ on-line education program:

Discipline	Count Completed
Nursing	329
Physician	33
Radiology	23
Respiratory Therapist	17
Leadership	18
APRN	9

On an ongoing basis, The MBT Healthstream on-line education course is assigned to all new hires in clinical settings. The Lab and Blood Bank employees had their own internal training on the new policies specific to their unit. Anesthesiologists also had training geared specific to their roles and responsibilities with the new policy.

Implementing New Policy to Reduce LOS: By October 2017, all members of the interprofessional team completed education and implemented the new MBT policy.

Outcome

Pre-Intervention Timeframe: April – May 2017

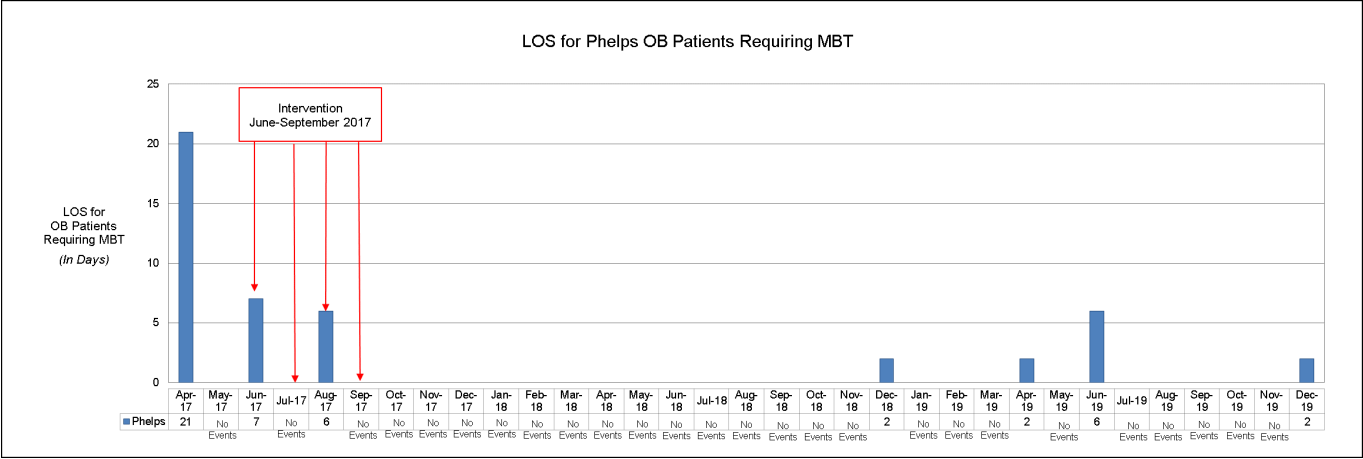
Pre-Intervention Baseline Data: During the pre-intervention timeframe, the LOS for Phelps OB patients requiring MBT was 21 days.

Intervention Timeframe: June – September 2017

Post-Intervention Timeframe: October 2017 – December 2019

Post-Intervention Data: During the post-intervention timeframe, the LOS for Phelps OB patients requiring MBT averaged 3 days. This represents 86% reduction in the average LOS.

EP8EO - Graph 1 - LOS for Phelps OB Patients Requiring MBT





NK1 - NURSING RESEARCH STUDY

Study Overview

Study Title: The Effect of an Educational Intervention on Perioperative Registered Nurses Knowledge, Attitudes, and Behaviors towards Pressure Injury Prevention in Surgical Patients.

IRB Approval Date: The study underwent expedited review and received Northwell Health IRB approval on May 11, 2018 (IRB#: 18-0240)

Study Start Date: May 12, 2018

Study Completion Date: December 13, 2019

Research Team

NK1 - Table 1 - Research Team

Name	Credentials	Discipline	Dept/Unit	Job Title/ Research Role
Peggy C. Tallier	MPA, EdD, RN	Nursing	Nursing Administration	Coordinator of evidence-based practice and research
Lorraine Presby	ADN, RN, CNOR	Nursing	Operating Room	Clinical educator (at the time)
Catherine McCarthy	BSN, RN, CNOR	Nursing	Operating Room	Clinical nurse, Phelps' site principal investigator

Study Aims

Study Purpose: The purpose of this study is to test the effectiveness of an educational intervention on perioperative registered nurse (RN) knowledge, attitudes, and behaviors towards pressure injury prevention in surgical patients.

Specific Aims:

- I. To measure the effect of an educational intervention on perioperative nurses' knowledge of pressure injury development, predictive and risk factors, and pressure

injury prevention protocols.

- II. To measure the effect of an educational intervention on perioperative nurses' attitudes and behaviors of pressure injury development, predictive and risk factors, and pressure injury prevention protocols

Literature Review Significance

This study was a continuation of previous work published by Tallier, Reineke, et al. (2017). The findings from the Phase 1 study titled "What are Perioperative Registered Nurses' Knowledge, Attitudes, Beliefs, and Behaviors towards Pressure Injury Prevention in Surgical Patients" indicated that perioperative nurses have a knowledge deficit about pressure injury risk assessment and prevention. The pilot study findings indicated that although most perioperative nurses are able to correctly identify and stage a pressure injury, they lack the requisite knowledge to identify patients at risk and implement prevention strategies in their practice. Perioperative nurses had not engaged in continuing educational activities such as attending or listening to a lecture, reading an article about pressure ulcers, or attending formal training in the last four years indicating the need for further education (Tallier, Reineke, et al., 2017).

Current Knowledge: Annually, 2.5 million patients are affected by pressure ulcers (AHRQ, 2016). In the United States overall incidence for hospital acquired pressure ulcers (HAPUs) is 4.5%. In addition to causing severe pain and suffering for patients, HAPUs are associated with adverse patient events including longer hospital length of stay and higher mortality both in hospital and within 30 days of discharge (Lyder et al., 2012). An under investigated area of concern is the development of HAPUs in the perioperative area. A recent systematic review of 17 international studies concluded that the incidence of surgery related HAPUs has increased with a pooled incidence of 15% (Chen, Chen, & Wu, 2012). Shaw, Shang, Lee, Kung, and Tung (2014) observed the development of stage 1 pressure ulcers in 9.8% of patients immediately following surgery and in 5.1% of patients thirty minutes post-operatively. Further, the risk was higher for patients who underwent cardiac surgery (18%) or hip fracture surgery ([22%], Chen, Chen, & Wu, 2012).

There is paucity of research regarding nurses' knowledge, attitudes, behaviors, and barriers related to pressure ulcer prevention in the perioperative area. It is necessary for this to be examined and further research is needed. Understanding nurses' knowledge, attitudes, behaviors, and barriers in relation to pressure ulcer prevention may contribute to the development of pressure ulcer preventive strategies in perioperative patients to lower adverse patient outcomes and costs associated with HAPUs. The terminology hospital acquired pressure ulcers (HAPU's) has been updated in the literature to hospital acquired pressure injuries (HAPI's). The current study reflects the new language however one of the instrument's uses the old terminology.

Significance to Nursing:

The results of this study:

1. Measured and tested the effectiveness of an Educational Intervention on nurses' knowledge, attitudes, beliefs, and behaviors towards Pressure Injury Prevention with the intent aimed at lowering the incidence of pressure injury development in surgical patients in the perioperative services.
2. Informed perioperative practice
3. Addressed gaps in the literature

Innovation

The new knowledge generated may inform practice change with risk assessment and prevention of pressure injury development in perioperative areas with surgical patients.

Study Design: Quantitative non-experimental pre-test post-test longitudinal study. Participants participated in an educational intervention and completed surveys prior to the intervention, within seven days completing the intervention, and six months after the intervention.

Research Question:

- What is the effect of an educational intervention on perioperative registered nurses' knowledge, attitudes, and behaviors towards pressure injury prevention in surgical patients?

Sample Description

Type of Sample: Non-randomized convenience sample

Inclusion Criteria:

- Licensed male or female RNs working in perioperative services (including operating room, ambulatory surgery, endoscopy, and post anesthesia care unit (PACU))
- Full time or part-time
- Have at least one year of experience in perioperative services

Exclusion Criteria:

- Agency nurses
- Student nurses
- RNs with less than one year experience in perioperative services
- Non-licensed personnel

Sample Size: A convenience sample size of 41 Phelps' perioperative registered nurse participants were recruited to participate in the study. Flyers were posted in the perioperative areas and nurses voluntarily agreed to participate in the study.

Study Location

Eleven hospitals, including Phelps Hospital, were selected to participate in the study.

NK1 - Table 2 - Participants Table

Principal Investigator:	Peggy C. Tallier, MPA, EdD, RN
Co-Investigator	Patricia R. Reineke PhD, RN
Site PI: Northwell Health Phelps Hospital	Catherine McCarthy
Site PI: Northwell Health Northern Westchester	Louella Tan
Site PI: Northwell Health Huntington Hospital	Donna Tanzi
Site PI: Northwell Health Lenox Hill Hospital	Eleonora Shapiro
Site PI: Northwell Health North Shore University Hospital	Laura Friedkin Wachel
Site PI: Mount Sinai St Lukes	Ishoma John-Peters
Site PI: Saratoga Hospital	Jane Stratton
Site PI: St Joseph's Health	Christopher Kowall
Site PI: White Plains Hospital	Andrea LaCourcier
Site PI: NYP Hudson Valley	Kathy Asaadoorian
Site PI: Northwell Health LJ Valley Stream	Lisa Chung

Study Procedures

Site PI Preparation: Approval to conduct the study was obtained from Mary McDermott, MSN, RN, APRN, NEA-BC, senior vice president, Patient Care Services and chief nursing officer at Phelps. Each participating site identified a PI. Catherine McCarthy, BSN, RN, CNOR, clinical nurse, OR, as site PI, and Lorrie Presby, RN, CNOR, clinical educator, completed CITI training and certification. Members of the research team trained site PIs on data collection protocols and the educational intervention. Each site PI was responsible for collecting data at three different time periods. IRB approval was obtained prior to beginning the study.

Initial Screening Procedures: Participants were recruited voluntarily. Recruitment was conducted using a combination of flyers and announcements at unit meetings. Catherine and Lorrie posted flyers and provided information about the study in the Phelps' Nursing News and Notebook.

Study Instruments: Study instruments (surveys) were provided in paper and pencil. The rationale for this is that the evidence has shown that the response rate for paper and pencil proctored surveys is higher than surveys administered electronically. Surveys took

approximately 20-30 minutes for participants to complete each time period.

Study instruments included:

1. Pieper-Zulkowski Pressure Ulcer Knowledge Test Version 2 (Pieper & Zulkowski, 2014, [PZ-PUKT]): A 72-item instrument that measures nurses' knowledge of pressure injury prevention. The PZ-PUKT has a reported Cronbach's alpha of .80. The PZ-PUKT also includes a 12-item demographic survey.
2. Pressure Sore Survey (Moore & Price, 2004): Two subscales were used to measure pressure injury prevention attitudes (11 items) and pressure ulcer prevention strategies (8 items). The Pressure Sore Survey has a reported Cronbach's alpha of .84.

Data Collection:

Pre-Test Procedure: The site PI provided individual survey packets to each participant. The PI instructed each participant that their packets contained two envelopes that were labeled Pretest Data (informed consent, two surveys, and two envelopes) and Posttest Data (two surveys and one envelope).

1. Pretest Data Envelope: Pretest data was collected at the site, June 2018 by the site PI. The PI instructed participants to open the Pretest Data envelope. The PI then instructed participants to read the informed consent. The PI provided time for questions before the informed consent was signed. After signing the informed consent, participants completed the two surveys. The participants then placed their two surveys and their signed informed consent into the envelope found inside the Pretest Data envelope. The participants were instructed to seal the envelope, print their name on the outside of the envelope, and return to the PI.
2. Posttest Data Envelope: The PI instructed participants to print their name on the outside of the Posttest Data Envelope and return it to the PI for completion after the educational intervention.

Educational Intervention Procedure: After the pre-test surveys were completed and collected by the site PI, the educational intervention was implemented the first week of August 2018. Four components from the AORN Prevention of Perioperative Pressure Injury Tool Kit were used for the educational intervention. Risk assessment and prevention each included two components from the toolkit which must be accessed directly from the AORN website. To allow for scheduling flexibility within the individual organizations, the educational intervention was initiated within seven days after the completion of the pretest surveys.

Educational Intervention

- I. Risk assessment
 - a. Perioperative Pressure Ulcer Risk & Prevention: Scott Triggers Webinar (30 minutes)
 - b. Scott Triggers Risk Assessment Instrument (10 minutes)
- II. Prevention

- I. The Basics of Positioning Patients in Surgery slide presentation – 45 minutes
- II. Prevent Perioperative Pressure Injury Checklist – 15 minutes

Posttest Data Collection Period #1: Posttest #1 data were collected the second week of August 2018 within seven days following the educational intervention. The site PI distributed the Posttest Data Envelope to the participants. The participants opened the envelope and completed the two surveys. The participants then placed their two surveys into the envelope found inside the Posttest Data Envelope. The participants were instructed to seal the envelope, print their name on the outside of the envelope, and return to the PI. The site PI placed all of the completed pretest and posttest #1 envelopes into the self-addressed stamped mailer and returned them to the PI.

Posttest Data Collection Period #2: Posttest data #2 were collected February 2019, six months after the educational intervention. The site PI distributed the Posttest Data Envelope to the participants by their name on the outside of the envelope. The participants opened the envelope and completed the two surveys. The participants then placed their two surveys into the envelope found inside the Posttest Data Envelope. The participants were instructed to seal the envelope, print their name on the outside of the envelope, and return to the PI. The site PI placed all of the completed posttest #2 envelopes into the self-addressed stamped mailer and returned them to the PI.

Data Analysis Methods: Data were entered into an electronic data capture tool by the data analyst. Data were entered twice to decrease the risk of data entry error. Versions were compared, disparities noted and then corrected in the original file. Discrepancies were reviewed by the data analyst for clarity and consensus. An audit trail of changes and rationales was maintained. Data were scored by the analyst only.

Data were analyzed using IBM SPSS statistical software version 23.0 (IBM, Armonk, New York). Descriptive statistics summarized demographics, knowledge, attitudes, and behaviors with reported means, standard deviations, frequencies, and percentages. A t-test was used to determine if (1) the training intervention improved test performance by comparing the average posttest score with the average pretest score (2) the respondents retained the knowledge acquired during training, by comparing the second average posttest score, administered six months later, with the initial average posttest score.

Results

Sample characteristics: Forty-one nurses participated in the survey ($n=41$). The majority of the nurses' had a bachelor's degree (71%, $n = 29$) with the remaining participants having an associate's degree (12%, $n = 5$), master's degree (15%, $n = 6$) or a diploma (2%, $n=1$). Ninety percent had five or greater years of experience ($n = 37$), and seventy-eight percent had ten or more years of experience in current specialty ($n=32$). None of the nurses held wound certification, however, more than 60% of the nurses held national board certifications.

Data Analysis Results

Nurses Knowledge

Nurses' knowledge was measured using Pieper-Zulkowski Pressure Ulcer Knowledge Test Version 2 (Pieper & Zulkowski, 2014, [PZ-PUKT]). Table 2 reports overall scores and the subscale (prevention, staging, & wound) scores.

Overall Test Results:

There were 72 items reported in the overall test results. For the majority of items, the percentage correctly answered increased between pre-and-posttest. On the item 22, *Persons, who are immobile and can be taught, should shift their weight every 30 minutes while sitting in a chair*, only 2.4% of the respondents provided the correct answer. A t-test revealed that for the PZ-PUKT overall, the difference between the average posttest score (52.32) and average pretest score (49.0) was statistically significant at $p < .001$. Furthermore 73% of the items were correctly answered. Turning to the average posttest 2 score (47.41), it was lower than the average posttest 1 score by nearly 4.91 points. This result was statistically significant at $p < .003$, indicating that respondents retained very little of the information six months out.

Prevention Subscale Results:

There were 28 test items reported in the Prevention subscale results. For all of the items, the percentage correctly answered increased between pre-and-posttest. On item 13, *a specialty bed should be used for all patients at high risk for pressure injury/ulcers*, only one respondent provided the correct answer. The t-test revealed that for the Prevention subscale, the difference between the average posttest score (21.20) and average pretest score (20.24) was statistically significant at $p < .01$. Furthermore 72% of the items were correctly answered. Turning to the average posttest 2 score (19.76), it was lower than the average posttest score by almost two points. However this result was not statistically significant at $p < .05$, indicating that respondents retained very little of the information six months out.

Staging Subscale Results: There were 20 test items reported in the staging subscale results. For 8 of the 20 of items, the percentage of items correctly answered increased between pre-and-posttest. Item 15, *When the ulcer base is totally covered by slough, it cannot be staged*, experienced the largest percentage point gain (25 points) from pre-to-posttest. The t-test revealed that for the Staging subscale, the difference between the average posttest score (14.54) and average pretest score (14.31) was not statistically significant at $p < .05$. However 72% of the items were correctly answered. Turning to the average posttest 2 score (13.90), it was lower than the average posttest score by less than one point. This result was not statistically significant at $p < .05$, indicating that respondents retained very little of the information six months out.

Wound Subscale Results:

There were 24 test items reported in the staging subscale results. For the majority of items,

the percentage of items correctly answered increased between pre-and-posttest. On item 24, *Bacteria can develop permanent immunity to silver dressings*, 12 or fewer respondents provided the correct answer across the pre-and-posttests. The t-test revealed that for the Wound subscale, the difference between the average posttest score (16.59) and average pretest score (14.49) was statistically significant at $p < .000$. Furthermore 71% of the items were correctly answered. Turning to the average posttest 2 score (15.24), it was lower than the average posttest score by a little over 1 point. However this result was not statistically significant at $p < .05$, indicating that respondents retained very little of the information six months out.

NK1 - Table 3 - Wound Subscale Results

Subscale Name (Number of test items)	Pre Test (percentage scored correctly and raw score)	Posttest # 1	Posttest# 2
Prevention (28)	72% 20.24	76% 21.20 * $p < .01$	71% 19.76
Wounds (24)	60% 14.49	69% 16.59 * $p < .000$	64% 15.24 * $p < .018$
Staging (20)	72% 14.31	73% 14.54	70% 13.90
Overall (72)	68% 49.0	73% 52.32 * $p < .001$	66% 47.71 * $p < .003$

Nurses' Attitudes toward Pressure Injury Prevention and Care

Pressure Sore Survey (Moore & Price, 2004) was used to measure pressure injury prevention attitudes (11 items) and pressure ulcer prevention strategies (8 items). Table 3 reports the scores. Respondents were asked to rate each survey item on a 5-point scale. For items one, two, and six the scale ranged from strongly agree=5 to strongly disagree=1. The rest of the items were scaled in reverse. Attitudes were assessed on each item which was weighted using the rating scale. A weighted score of less than 1.5 was considered a very negative attitude (VNA) while a weighted score above 4.6 was considered a very positive attitude (VPA). Overall respondents mean score was 2.91 indicating that respondent attitudes were neither positive nor negative (NPNA).

On average posttest 1 survey showed no change from the pretest scores as the overall score was 2.91 suggesting that respondents' attitudes did not change after receiving training. The overall average score on the posttest 2 survey, which was administered six months later, was similar to the posttest 1 overall score of 2.90 suggesting that respondents attitudes did not decline but remained the same from pretest to posttest 2.

NK1 - Table 4 - Pretest Results

Item	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Weighted Mean	Attitude Scale*
(1) All inpatients are at potential risk of developing pressure sores	159 71.3%	53 23.8%	1 0.4%	8 3.6%	2 0.9%	4.609865	VPA
(2) Pressure sore prevention is time consuming for me to carry out	11 5.0%	38 17.1%	47 21.2%	62 27.9%	64 28.8%	2.414414	NA
(3) In my opinion, patients tend not to get as many pressure sores nowadays	40 17.9%	73 32.6%	65 29.0%	39 17.4%	7 3.1%	2.553571	NA
(4) I do not need to concern myself with pressure sore prevention in my practice	147 65.6%	67 29.9%	3 1.3%	0 0.0%	7 3.1%	1.450893	VNA
(5) Pressure sore treatment is a greater priority than pressure sore prevention	122 54.7%	74 33.2%	18 8.1%	5 2.2%	4 1.8%	1.632287	NA
(6) Continuous nursing assessment of patients will give an accurate picture of their pressure sore risk	137 61.2%	79 35.3%	3 1.3%	2 0.9%	3 1.3%	4.540179	PA
(7) Most pressure sores can be avoided	6 2.7%	4 1.8%	21 9.4%	123 54.9%	70 31.3%	4.102679	PA
(8) I am less interested in pressure sore prevention than other aspects of nursing care	66 29.6%	88 39.5%	47 21.1%	19 8.5%	3 1.3%	2.125561	NA
(9) My clinical judgement is better than any pressure sore risk assessment tool available to me	44 19.6%	91 40.6%	65 29.0%	20 8.9%	4 1.8%	2.325893	NA
(10) In comparison to other areas of nursing care, pressure sore prevention is a low priority for me	85 37.9%	103 46.0%	23 10.3%	11 4.9%	2 0.9%	1.848214	NA
(11) Pressure sore risk assessment should be regularly carried out on all patients during their stay in hospital	12 5.4%	4 1.8%	2 0.9%	62 27.7%	144 64.3%	4.4375	PA

Nurses Behavior and Use of Pressure Tools

Respondents were asked a series of questions about their behaviors regarding pressure sore assessment, prevention, and use of pressure sure tools. In the pretest survey, 42% of the respondents reported that they carried out risk assessment on all patients, while 40% reported that they carried out risk assessment on none of the patients. The posttest 1 and posttest 2 surveys reported a similar result. Seventeen percent of respondents reported that they carried our risk assessment at the time of admission only. These percentages dropped to 15% on the posttest surveys. Approximately a third of the respondents reported carrying out risk assessment daily during the patients' stay in the hospital. Both posttests indicated similar percentages. Regarding writing up prevention care plans, 20% of respondents reported on the pretest that they prepare plans on all patients at risk. A must smaller percentage reported writing prevention care plans on both posttest surveys. The majority of respondents on all three surveys reported that they did not prepare pressure sore prevention plans on patients. On the pretest and posttest 2 surveys more than half the respondents reported never having read pressure sore prevention plans while 44% of posttest 1 responses indicated 'less often'. Only 37% of respondents reported that they reviewed pressure sore prevention plans on the pretest survey, 22% on the posttest 1 survey, and 37% on the

posttest 2 survey. The majority of respondents (54%) checked off the 'other' category on the pretest, 42% on the posttest 1 survey, and 52% on the posttest 2 survey. A review of the reasons why care plans were not read, the majority of respondents indicated that they worked in an area where the plans were not necessary, such as outpatients and ambulatory care. Less than a quarter of respondents reported that they updated care plans daily during the patient's stay in the hospital across all three surveys. Approximately 40% of respondents reported 'never' updating care plans across all three surveys. More than 70% of respondents reported in the pretest that they carry out pressure sore prevention strategies. These percentages increased to over 80% on the posttests. When respondents were asked why they carry out prevention strategies 97% indicated on the pretest that 'They are an essential part of nursing', 57% percent indicated that 'I see other nurses doing the same', 43% indicated that 'Other nurses expect me to', and 57% indicated that 'The hospital policy states that I should.' For posttest 1 these percentages were 90%, 22%, 15% and 29% respectively. For posttest 2 the percentages were 83%, 12%, 10% and 24%. Clearly, the majority of respondents across the three surveys indicated that 'They are an essential part of nursing' being the main reason for carrying out pressure sore prevention strategies.

Three questions on the survey focused on pressure sore tools — the presence of pressure sore risk assessment tools, the presence of pressure sore grading tools, and formal training on pressure sore prevention and management. More than half of the respondents indicated the presence of a pressure sore risk assessment tool on the pretest, 46% on the posttest 1 survey, and 41% on the Posttest 2 survey. The majority of respondents could not recall what risk assessment tool was present. The few respondents who did remember indicated that it was the Braden Risk Assessment Tool. A little more than half of the respondents indicated on the pretest the presence of a pressure sore grading tool (54%). This percentage dropped to 34% on posttest 1 one and 42% on posttest 2. Almost none of the respondents across the three surveys could recall the tool that was available. Approximately 78% of the respondents reported on the pretest that they received training on pressure sore prevention and management. This percentage dropped to 73% on posttest 1 and increased to 85% on Posttest 2. Across all three survey's respondents reported a variety of formal training sessions – in-service training, wound care clinics, wound conference held at the hospital, online learning modules such as Health Stream Learning, NDQI pressure modules, and Meditech modules, nursing orientations, assessments of pressure sore risk assessments, and annual educational reviews.

Summary of Key Findings

A summary of the findings demonstrates that perioperative nurses have a knowledge deficit about pressure injury risk assessment, prevention, and wound characteristics. This provides an opportunity for further education especially in the areas of risk assessment and prevention. This study examined perioperative registered nurse's knowledge, attitudes, behavior, and barriers towards pressure ulcer prevention in perioperative patients. Nurses' overall score pretest was 68%, increased to 73% a statistically significant finding ($p < .001$)

one week after the teaching intervention (posttest 1), and then decreased to an overall score of 66% also a statistically significant finding ($p < .003$) six months after the teaching intervention. This indicates that although most perioperative nurses are able to correctly identify and stage a pressure ulcer, they lack the requisite knowledge to identify patients at risk and implement prevention strategies in their practice and that they are retaining very little knowledge six months after the teaching intervention.

The majority (95%) of perioperative nurses had engaged in continuing education activities such as attending or listening to a lecture, reading an article about pressure ulcers, or attending formal training.

Perioperative nurses had neither positive nor negative attitudes towards pressure ulcer prevention. This indicates the need for further education regarding the prevention of pressure injuries in perioperative patients. Nursing practice behaviors have an important role in pressure ulcer prevention. In the current study, although 97% of the perioperative nurses believed carrying out pressure ulcer prevention strategies is essential to nursing practice, 42% reported conducting pressure injury risk assessment on all patients and 40% reported they carried out risk assessment on none of the patients. Posttest one and two had similar findings. Even fewer reported developing, updating, and reading pressure prevention care plans.

Although approximately 40% of the participants reported that the use of a pressure injury risk assessment tool was implemented the majority could not recall what tool was used and on those who did recall, they stated the Braden Scale was in use. This scale is not recommended in the perioperative area according to best practices. This indicated the need for further education and the implementation of a risk assessment tool more properly suited to perioperative patients.

Implications of Findings:

This study explored the effect of an educational intervention on perioperative registered nurse's knowledge, attitudes, and behavior towards pressure ulcer prevention in perioperative patients and attempted to underscore the need for ongoing and continuing education. Findings from this study indicated that perioperative nurses have a knowledge deficit about risk assessment pressure injury prevention and that there is need for the implementation of an appropriate risk assessment tool for the assessment and prevention of pressure injury in perioperative patients. An understanding of perioperative registered nurses' knowledge, beliefs, attitudes, behaviors, and barriers to pressure ulcer development will inform perioperative practice and lead to the development of interventions aimed at lowering the incidence of pressure ulcer development, improving surgical patient outcomes, and lowering hospital costs.

Recommendations to the Organization: Peggy Tallier, MPA, Ed,D, RN shared the Phelps' findings with Mary, the principal investigators, Catherine and Lorrie, and Kathleen Scherf,

MPA, BSN, RN, NEA-BC, CAPA, nursing director, Surgical Services for discussion of the best methods for dissemination at Phelps. The research study was presented at the New Knowledge and Innovation Shared Governance Council meeting which had representatives from the OR, PACU and Deborah (Debi) Reynolds, BA, AAS, RN, WOCN, clinical nurse, enterostomal therapy in January 2020. Research findings are scheduled to be disseminated to the clinical nurses from the OR, Endoscopy unit, ASU, and PACU, during the Perioperative shared governance unit council, Perioperative nursing staff meetings and the monthly Surgical Services meeting. During these forums, the perioperative nurses have the opportunity to discuss the importance of the results, collaborate with Debi and Perioperative educators to implement the Scott Triggers Risk Assessment tool for perioperative patients and conduct ongoing review of pressure injury prevention strategies with Debi skin champions and the clinical nurses of surgical services.