



CHOC Children's Hospital ***Best Evidence and Recommendations***

Best Practices in NICU Nurse Residency Programs

Christina Clay, MSN, RNC-NIC
cclay@choc.org

PICO: What are best practices for content, activities, and delivery of education in a NICU RN residency program to increase new graduate competence and retention?

P (Population/problem): In a NICU RN residency program

I (Intervention/issue): what are the best practices for content, activities, and delivery of education

C (Comparison): compared to standard of care

O (Outcome): to increase new graduate competence and retention?

Background:

New graduates account for the largest numbers of nurses entering and exiting the profession. Turnover is costly, especially in specialty settings. Recognizing the challenges of transitioning new nurses into practice and the high costs associated with turnover, many health care organizations across the United States have implemented nurse residency programs (NRPs). NRPs offer an effective way to address the needs of new nurse graduates and assist with their transition to nursing practice. Hospital leaders have the responsibility to create programs that will contribute to the development of strong nurses who provide outstanding patient care (Welding, 2011). NRPs are designed to increase retention and provide essential tools to promote graduate nurse success and productivity; to increase competence, leadership and job satisfaction and decrease turnover. The University Health System Consortium (UHC) and the American Association of Colleges of Nursing (AACN) report 95.6 % retention for those involved in a NRP.

Neonatal ICU nursing in particular is a highly specialized area of nursing focusing on the care of medically fragile newborns, including infants born prematurely, and those requiring medically complex care for birth defects, infection, cardiac malformations, and surgical problems. The novice, new graduate nurse lacks the experience necessary to anticipate the unique needs of an unstable neonatal patient. In order to ensure the delivery of safe patient care to this vulnerable patient population, it is imperative that a neonatal new graduate nurse receive specialty training beyond what is provided in a general NRP.

In 2002, CHOC Children's partnered with a formalized comprehensive educational and training residency program to transition newly graduated nurses from student to safe, confident and competent professional practitioner. The CHOC NRP continued to evolve through the years and, in 2015, the organization officially transitioned away from the formal program. This enabled CHOC to create its own program consistent with organizational policies and procedures, ensuring meaningful and relevant educational content, while continuing to incorporate supportive mentor and debriefing opportunities.

The current CHOC Children's NRP is a 17-week long program. New graduate RNs are paired with 1 to 2 preceptors for continuity in teaching/learning styles, and clinical experiences. Preceptor classes are offered throughout the year and include education on the roles and responsibilities of the preceptor, principles of adult learning theory, effective communication, and realistic expectations for preceptees. Progress evaluation tools and two-way feedback communication are used throughout the program by preceptors and new graduate RNs to discuss experiences, needs and goals with educators, managers, and



the residency director. General pediatric didactic is facilitated through the clinical education department. NICU specific didactic coursework is coordinated through the unit educator and taught by NICU nurses and providers. Clinical skills are mastered through simulation labs, skills days, and via hands-on patient care experiences. The CHOC NRP includes formal debriefing and mentoring sessions as well as education on self-care and wellness. Subjective evaluation is conducted throughout the 17-weeks and upon program completion and is based on the self-reported experiences of the new graduates. Improvements are made based on the feedback that is received. One of the inherent challenges to moving away from a structured program is a lack of standardization and processes to ensure ongoing evaluation and improvement. Currently, there are no objective tools used to evaluate the success of the program.

New graduate RNs hired into the NICU require specialized training. Over the past few years, CHOC Children's has oriented a large number of new graduate NICU nurses. At the same time, many experienced nurses have left the organization which has created a gap in our resources and ability to efficiently train the new nurses. With the current length of the NRP, and limited time spent in the clinical setting, feedback from the NICU nurses and providers has been that new graduate NICU nurses are not sufficiently prepared for independent practice. Specifically, there is concern about the level of critical thinking and skills necessary to care for this complex patient population. The purpose of this evidence-based practice project was to identify best practices in the content, activities, and delivery of education in a NICU NRP to increase new graduate competence and retention and determine opportunities to enhance the existing CHOC NRP.

Search Strategies and Databases Reviewed:

- Databases searched for this review included CINAHL, Medline in EBSCO and Pub Med. Key search words: new graduate nurse, nurse residency program, NICU nurse residency, pediatric nurse residency program, subspecialty nurse residency program, subspecialty nurse training program.
- Websites reviewed included the National Association of Neonatal Nursing, Association of Women's Health, Obstetric and Neonatal Nurses, American Association of Critical Care Nurses, American Nurses Credentialing Center, CHLA RN Residency in Pediatrics, Cook Children's Hospital.

Synthesis of the Evidence:

- Residency programs are defined as planned, comprehensive periods of time during which registered nurses with less than 12 months of experience can acquire the knowledge, skills, and professional behaviors necessary to deliver quality care that meets standards of practice defined by a professional society or association or the applicant organization. The program must be at least 6 months in length, encompassing organizational orientation, practice-based experience, and supplemental activities to promote nursing professional development (ANCC).
- Research suggests that residency and fellowship programs can reduce nurse turnover, increase nurse job satisfaction, and improve clinical competence, resulting in a positive return on investment for the organization.
- A successful new graduate orientation must include a competency based clinical orientation and classroom instruction.
- Best practices for NRPs include: guided experiences with preceptors, didactic content, clinical skills, debriefing and self-care sessions, formal mentoring, and program evaluation.
- Components of NRPs (especially those of organizations with subspecialty nursing), including length of programs, need to be identified and evaluated.



- Curriculum should be individualized based on nursing specialty (ie NICU specific curriculum).
- Professional organizations such as the National Association of Neonatal Nurse, Association of Women's Health, Obstetric and Neonatal Nurses, and the American Association of Critical-Care Nurses provide an evidence-based framework specific to new graduate NICU curriculum. This includes: Fetal to Neonatal Circulation; Assessment of the Neonate's Transition, Comprehensive Assessment of the Neonate, Developmental Care of the Newborn, Family-Centered Care in the NICU, Maternal Factors Affecting the Newborn, Neonatal Nutrition, Neonatal Pain Assessment and Management, Neonatal Skin Care, Neonatal Pharmacokinetics, Thermoregulation of the Newborn Infant, Apnea of Prematurity, Bronchopulmonary Dysplasia, Meconium Aspiration Syndrome, Pneumothorax in the Neonate, Neonatal Respiratory Distress Syndrome, Transient Tachypnea of the Newborn, Immunology and Infection, Neonatal Sepsis, Neonatal Cranial Hemorrhage, Neonatal Seizures, Glucose Homeostasis in the Neonate, Hyperbilirubinemia, Metabolic Disorders of the Newborn, Central Lines in the Neonate, Congenital Cardiac Defects, Gastroenterology, Genitourinary, Hematologic Issues, and Surgical Issues in the Neonate.
- The American Nurses Credentialing Center (ANCC) offers a Practice Transition Accreditation Program™ (PTAP™) for NRPs. The criteria provide organizations with a framework for creating or evaluating their NRP and offer an online tool to calculate return on investment (Cosme, 2015). In addition, these criteria help organizations ensure that all nurses successfully transition into different practice settings as they begin their journey as lifelong learners and healthcare practitioners.
- Objective evaluation tools/surveys have been developed to measure the success of knowledge acquisition related to new graduate programs: The Basic Knowledge Assessment Tool (BKAT), The Casey-Fink Graduate Nurse Experience Survey, and the State-Trait Anxiety Inventory for adults (STAII).

Practice Recommendations:

- Consider maintaining separate NRP acute care and critical care tracks.
- Evaluate and determine appropriate length of critical care track.
- Develop a NICU ad hoc group to evaluate didactic coursework to maximizing learning and efficiency.
- Collaborate with the organization's NRP to review and organize the agenda so that curriculum is individualized based on subspecialty (NICU specific curriculum).
- Consider outsourcing NICU specific training (didactic/skills labs) to an existing training center that utilizes the evidence-based curriculum recommended by NANN, AACN, AWHONN, etc.
- Continue to build preceptors and mentors.
- Implement the use of an evaluation tool or survey such as The Basic Knowledge Assessment Tool (BKAT), The Casey-Fink Graduate Nurse Experience Survey, the State-Trait Anxiety Inventory for adults (STAII).
- Utilize tools provided by ANCC to evaluate NRP and the organization's return on investment.
- Reevaluate length of program in reference to recommendations set forth by AACN, ANCC, CCNE.
- Consider applying for formal program accreditation.

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Bibliography:

- Al-Dossary, R., Kitsantas, P., and Maddox, P. J. (2014). The impact of residency programs on new nurse graduates' clinical decision-making and leadership skills: a systematic review. *Nurse Education Today*, 34(6). 1024-1028.
- Billings, D. M., Jeffries, P. R., Daniels, D. M., Rowles, C., Stone, C. L., and Stephenson, E. (2006). Developing and using online courses to prepare nurses for employment in critical care. *Journal for Nurses in Staff Development*, 22(2). 87-92.
- Bortolotto, S. J. (2015). Developing a comprehensive critical care orientation program for graduate nurses. *Journal for Nurses in Professional Development*, 31(4). 203-210.
- Cavanaugh, D. A., & Huse, A. (2004). Surviving the nursing shortage: developing a nursing orientation program to prepare and retain intensive care unit nurses. *The Journal for Continuing Education in Nursing*, 35(6). 251-256.
- Chappell, K. B., & Richards, K. C. (2015). New graduate nurses, new graduate nurse transition programs, and clinical leadership skill. *Journal for Nurses in Professional Development*. 31(3). 128-137.
- Chesnutt, B., & Everhart, B. (2017). Meeting the needs of graduate nurses in critical care orientation: Staged orientation program in surgical intensive care. *Critical Care Nurse*, 27(3). 36-52.
- Cosme, S. (2015). Residency and fellowship programs for RNs and advanced practice RNs. *The Journal of Nursing Administration*, 45(9). 416-417.
- Delack, S., Martin, J., McCarthy, A. M., and Sperhac, A. M. (2015). Nurse residency programs and the transition to child health nursing practice. *The Journal of Nursing Administration*, 45(6). 345-350.
- Fiedler, R., Read, E. S., Lane, K. A., Hicks, F. D., and Jegier, B. J. (2014). Long-term outcomes of a postbaccalaureate nurse residency program. *The Journal of Nursing Administration*, 44(7/8). 417-422.
- Halfer, D. (2007). A magnetic strategy for new graduate nurses. *Nursing Economic\$*, 25(1). 6-11.
- Herdrich, B., & Lindsay, A. (2006). Nurse residency programs: redesigning the transition into practice. *Journal for Nurses in Staff Development*, 22(2). 55-62.
- Kramer, M., Maguire, P., Halfer, D., Goodloe, L., Klaristenfeld, J., Teasley, S., Forsey, L., and Lemke, J. (2012). The organizational transformative power of nurse residency programs. *Nursing Administration Quarterly*, 36(2). 155-168.
- Meyer Bratt, M. (2013). Nurse residency program: best practices for optimizing organizational success. *Journal of Nurses in Professional Development*, 29(3). 102-110.



Olson-Sitki, K., Wendler, M. C., and Forbes, G. (2012). Evaluating the impact of a nurse residency program for newly graduated registered nurses. *Journal of Nurses in Staff Development*, 28(4). 156-162.

Prause, P., Clinton, S., Ball, N., Kloosterman, C., Biller, J., and Augustus, R. (2009). An innovative orientation program for the new graduate nurses in the pediatric intensive care unit. Presentation at AACN 2009 NTI & Critical Care Exposition. Retrieved from https://www.researchgate.net/publication/255655311_An_Innovative_Orientation_Program_for_New_Graduate_Nurses_in_the_Pediatric_Intensive_Care_Unit.

Rush, K. L., Adamack, M., Gordon, J., Lilly, M., and Janke, R. (2013). Best practices of formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies*, 50. 345-346.

Smith, J. B., Rubinson, D., Echtenkamp, D., Brostoff, M., and McCarthy, A. M. (2016). Exploring the structure and content of hospital-based pediatric nurse residency programs. *Journal of Pediatric Nursing*, 31. 187-195.

Welding, N.M. (2011). Creating a nursing residency: Decrease turnover and increase clinical competence. *Medsurg Nursing*, 20(1). 37-40.

Nurse Journal (2017). *How to Become a NICU Nurse (Neonatal Nurse)*. Retrieved from <https://nursejournal.org/neonatal-nursing/how-to-become-a-nicu-nurse/>.

NANN (2017). *Is a Career in Neonatal Nursing Right for You?* Retrieved from <http://nann.org/professional-development/what-is-neonatal-nursing>.