

7-1-2019

The paediatric nurse practitioner: The evolution of a role

Velerie Kiers

MGH Institute of Health Professions, Boston, USA

Caitlyn Shea

MGH Institute of Health Professions, Boston, USA

Elissa Ladd Dr

MGH Institute of Health Professions, Boston, USA, eladd@mghihp.edu

Follow this and additional works at: <https://impressions.manipal.edu/mjnhs>



Part of the [Nursing Commons](#)

Recommended Citation

Kiers, Velerie; Shea, Caitlyn; and Ladd, Elissa Dr (2019) "The paediatric nurse practitioner: The evolution of a role," *Manipal Journal of Nursing and Health Sciences*: Vol. 5: Iss. 2, .

Available at: <https://impressions.manipal.edu/mjnhs/vol5/iss2/9>

This Review Article is brought to you for free and open access by the MAHE Journals at Impressions@MAHE. It has been accepted for inclusion in Manipal Journal of Nursing and Health Sciences by an authorized editor of Impressions@MAHE. For more information, please contact impressions@manipal.edu.

The paediatric nurse practitioner: The evolution of a role

Valerie Kiers, Caitlyn Shea, Elissa Ladd*

Email: eladd@mghihp.edu

Abstract

The paediatric nurse practitioner (PNP) is an advanced practice nursing role aimed at providing high quality care to children of all ages. Paediatric nurse practitioners are credentialed to provide a wide range of services dependent on their role as a paediatric nurse practitioner, i.e. primary care, acute care or neonatal. There are two possible paths that can be taken to become a paediatric nurse practitioner: the traditional path or apply for direct entry nursing program after completing Bachelor's degree. This article describes the path to paediatric nurse practitioner practice.

Key words: The paediatric nurse practitioner (PNP), role, primary care, acute care

Introduction

The paediatric nurse practitioner (PNP) is an advanced practice nursing role that has been in existence in North America since the 1960s (Parker & Hill, 2017). The role is now broadly implemented in a variety of healthcare settings in the United States and Canada, i.e. primary care, neonatal intensive care units, paediatric intensive care units, and in emergency care (Canadian Council of Registered Nurse Regulators, 2016; Martyn, Martin, Gutknecht, & Faleer, 2013). PNPs provide high-quality care to children of all ages, ranging from birth to young adulthood, typically from ages 0-21. The role of the PNP is specialized based on the population and they are trained solely in the realm of the healthcare of the child, therefore making them experts in childhood health maintenance and disease management (The role of the pediatric nurse practitioner, 2010). The aim of this paper is to describe the historical development, scope, and practice of the PNP, a nurse who has become an essential member of the healthcare team in a number of countries.

The emergence of a new role

In the late 1960s, a nurse and a physician, together, came to the realization that there was a great unmet need for the healthcare of children, especially in rural areas, in their home state of Colorado in the United States. What ensued was a professional collaboration of a lifetime and the beginning of a transformation in the role of nursing and of healthcare. The nurse, Loretta Ford, and the physician, Dr Henry Silver, subsequently developed the first PNP program at the University of Colorado, which became a model for advanced practice nursing worldwide. Their approach was based on the delivery of care to populations with restricted access. As Ford noted,

"I was well aware of the unmet health needs of people of all ages in the community and confident that nurses could be prepared to meet those needs by facilitating access and promoting continuity and coordination of care."
(Ford, 1979, p. 517)

The PNP at that time emanated from the role of the public health nurse and focused on the health of the community with health promotion and disease prevention as its focus (Pulcini & Wagner, 2002). The PNP program that was started at the University of Colorado was soon followed by the Bunker Hill/Nurse Practitioner program in Boston, which was dedicated to serving low-income children in urban and rural settings

Valerie Kiers^{1,2}, Caitlyn Shea², Elissa Ladd³

^{1,2} Pediatric nurse practitioner, MGH Institute of Health Professions, Boston, USA

³ Director of Global Health Equity and Innovations and Associate Professor, Nursing, MGH Institute of Health Professions, Boston, USA

Manuscript received: 16 February 2019

Revision accepted: 22 July 2019

*Corresponding Author

How to cite this article: Kiers, V., Shea, C., Ladd, E.(2019). The paediatric nurse practitioner: The evolution of a role. *Manipal Journal of Nursing and Health Sciences*, 5(2). 49-55.

(Pulcini & Wagner, 2002). While many of the early PNPs met resistance from both medicine and nursing, the nurses persevered over the following decades and gained increasing levels of legitimacy, especially from the practice, regulatory and reimbursement perspectives (Keeling, 2015).

The paediatric nurse practitioner today

The PNP is an advanced practice healthcare provider focusing on primary care, preventative health, growth and development, and management of acute and chronic illness. The credentials that are required to practice in the United States include a Bachelor's of Science in Nursing (BSN), licensure as Registered Nurse (RN), a Master's of Science in Nursing (MSN) from a PNP program and certification as a paediatric nurse practitioner (PNP-BC). PNP training embodies advanced knowledge, critical thinking skills and master's level clinical expertise, specifically in the domain of paediatrics, which enables them to promote health and wellness, prevent disease and disability, and restore health during acute and chronic illness (Vanderbilt University, School of Nursing, 2019).

PNPs serve as interdependent members of the healthcare team and form interdisciplinary partnerships in order to provide optimal care for their patients. They are first and foremost nurses, and therefore gathering information about physical symptoms, psychosocial components, and environmental information is imperative in order to provide holistic and empathetic care (Bucceri, Burke, Lee & Spano, 2018). PNPs promote good health habits, follow evidence-based clinical practice guidelines, implement screenings for early detection, advocate for their patients and their families, provide anticipatory guidance for acute and chronic illness, and provide health counseling for wellness, lifestyle choices, environment and childhood development (Willhaus, 2010). As Willhaus (2010) notes, "patience, flexibility, empathy, and the ability to listen, take a gentle approach with children, take a good history and problem solving," are critical elements that define the PNP role. PNPs have a reputation for providing high-quality care and have high patient satisfaction rates in the United States of America (Bucceri, Burke, Lee & Spano, 2018).

Services provided by paediatric nurse practitioners

PNPs are credentialed to provide a wide range of services dependent on their role as a PNP, i.e. primary care, acute care or neonatal. Also, their services may vary depending on the type of setting they work in; urban, rural, hospital, private practice or community health centre. Most commonly, the PNP's activities in daily practice include assessing normal vs abnormal growth and development, performing a complete and all-inclusive health history and physical exam, ordering and interpreting laboratory and diagnostic tests, diagnosing and treating acute and minor illnesses, prescribing and managing medications, ordering and administering immunizations. Additional activities may also include school physicals and pre-participation sports physicals, caring for and counseling children with commonly identified chronic illnesses, and providing health education and anticipatory guidance to parents and patients on normal growth, development and health habits (Willhaus, 2010). PNPs are also expected to promote wellness oriented care, coordinate interdisciplinary services for children with complex medical problems, integrate ethical principles into complex plans and advocate for their paediatric patients and their families (Vanderbilt University: School of Nursing, 2019). PNP's ensure that the patients and their families are comfortable, taking the time to listen to the family's concerns and utilize a patient and family centred care approach, always collaborating and including the patient and family in the plan of care (Willhaus, 2010). Overall, the services PNPs deliver are numerous and provide their paediatric patients with all-encompassing and compassionate healthcare.

Paediatric nurse practitioner education

The curriculum for PNPs varies based on school, which paediatric specialty and country being chosen. In the US and Canada, nurses must complete a Bachelor's of Science in Nursing and have an active registered nursing license. For the Master's or Doctor of Nursing practice portion of clinical education, most schools have similar course requirements with only a few slight variations (see appendix A). Both didactic and clinical courses prepare nurses to enhance and further their skills by gaining specialized knowledge and clinical competency to practice in primary care, acute care,

or neonatology (American Association of Nurse Practitioners, 2019). Along with the didactic content covered during the Masters' portion of schooling, students must complete the required number of clinical hours designated by their institution in collaboration with the certification body. On average, acute care PNP programs and primary care PNP programs require 645 and 607 clinical hours, respectively (Hawkins-Walsh, Berg, Lindeke & Osborn, 2011). All schools include the baseline requirements necessary to sit for the PNP national certification exam.

Paediatric nurse practitioner assessment

In different settings, there are different assessment tools and standards. Currently, there is not a single standardized program of knowledge and skills that must be obtained, except that one must be able to pass the certifying boards examination. There are also expectations for practice once the PNP begins working in the field. Most institutions use a variety of measurement tools to assess the knowledge and clinical skills of the PNP student. Typically there are academic measures that include written and verbal examinations on theory content, practical assessments including objective structured clinical examinations (OSCEs), simulation laboratory experiences and procedure evaluations. Additionally, PNP's training includes clinical training with a clinical preceptor on a one on one basis. The clinical preceptor, who additionally assesses their skill set and capabilities, provides constructive feedback on clinical skills and theoretical knowledge. The clinical preceptors hold the majority of the responsibility for evaluating the PNP student, as they spend the most amount of time assessing the student's knowledge, skills and competency in the field. Since they practice under their license and jurisdiction as a student, the preceptors ensure that the student is qualified and is performing at a sufficiently high standard of care. Lastly, the final requirement necessary to become a PNP is the achievement of qualifying marks on the national certifying PNP examination.

Researchers have investigated the characteristics of the educational programs for both primary care and acute care PNPs (Hawkins-Walsh, 2011). Their study looked at different educational modalities used in 75 different

PNP programs around the United States. Surveys were conducted by both faculty and staff to compare different educational programs. They found that these programs had many more similarities than differences in preparation. In terms of clinical competencies, the study found that both programs use supervised clinical hours as the core method for assessing competence. However, regarding the instruction of specific clinical skills, more invasive procedures were taught in acute care programs. However, there was a discrepancy in the level to which these skills were taught. For example, incision and drainage procedures were taught in 69% of primary care programs and nearly all acute care programs. Some programs completed these skills in labs. The minority of programs (28%) taught only how to perform the procedure, and others only taught how to order and interpret the results. Overall all of the acute care programs and 85% of primary care programs required some lab simulation as an essential component. Clinical experience and preceptors continue to be the most substantial portion of clinical skills development. The future of PNP educational programs is likely to evolve and develop specific guidelines to which all PNP programs would be expected to adhere in order to provide care across a range of health issues in children (Hawkins-Walsh, 2011).

Primary care paediatric nurse practitioner

One area in which PNPs play an important role is that of a primary care provider. The number of healthcare providers who choose to pursue a career in primary care and family practice is steadily declining. During the past few decades, primary care PNPs have emerged to fill this shortage by acting as primary care providers for children (Naylor, 2010). Primary care PNPs can practice in a wide variety of settings which include private practices, community health centers, schools, ambulatory health centers and hospitals. The primary care PNP can also choose to work in a subspecialty such as neurology, endocrinology, gastroenterology and many others (Pediatric Nurse Certification Board [PNCB], 2019a). PNPs see a wide spectrum of patients including newborns, infants, children and adolescents. In the primary care setting, the provider often forms a long-term relationship with patients and their families to provide continuous healthcare for children.

The primary care PNP can perform routine physical examinations, with developmental screenings and provide essential health maintenance. The PNP can administer vaccinations, as well as formulate diagnoses and treat common childhood illnesses. One of the most important roles for the primary care PNP is that of a health educator and providing information on anticipatory guidance as a child ages. This is an essential component for promoting lifelong health (University of Washington: School of Nursing, 2019). It has been noted that nurse practitioner providers are not only cost effective, but they have been proven to provide high quality primary healthcare (Naylor, 2010).

Acute care paediatric nurse practitioner

PNPs may also be trained in acute care. The acute care focused PNP is a newer model, developed in the 1990s as an extension to the primary care role. It was developed in response to shortages of healthcare providers in the acute setting and economic necessity (Percy, 2007). Acute care and primary care PNPs have similar basic roles in child healthcare; however, they generally work in different settings. With an acute care focus, PNPs practice in hospital based settings, intensive care units, emergency departments and other subspecialty clinics, such as cardiology. In this role, the PNP cares for paediatric patients with acute, chronic and complex medical illnesses. They provide healthcare services to children from infancy to young adulthood, but the patients generally have life-threatening illnesses, serious chronic disease and organ dysfunction (PNCB, 2019b).

Appendix A

Prerequisite courses

Human Anatomy and Physiology 1	Human Nutrition
Human Anatomy and Physiology 2	Statistics
Human Growth and Development Across the Lifespan	Microbiology

*A bachelor's degree from an accredited institution must also be completed in order to gain acceptance.

General paediatric nurse practitioner curriculum

Healthcare Policy and Politics	Healthcare of the Child Practicum A
--------------------------------	-------------------------------------

Research for Clinical Practice	Healthcare of the Child Practicum B
Advanced Pathophysiology	Healthcare of the Child Practicum C
Advanced Health Assessment of the Paediatric Patient	Healthcare of the Child Practicum D
Primary Care of the Child Theory 1	Healthcare of the Child Practicum E
Advanced Pharmacology for Paediatrics	Diagnostic Evaluations
Professional Issues	Paediatric Behavioral Theory
Primary Care of the Child Theory 2	Scholarly Project
Adolescent Health Theory	Elective

Since the acute care PNP role is much newer, there are regulatory issues that must be clarified. For example, there are some primary care PNPs who practice in acute settings and may not be directly educated in acute care principles. Acute care PNPs can also provide health maintenance and primary care services to children living with acute and chronic illnesses. As a result, while there are separate educational programs, primary care and acute care PNP have overlapping education and skills. The roles are differentiated by the skills that are taught in the educational program. Acute care PNPs practice more invasive skills and may do procedures such as removal of chest tubes, perform lumbar punctures and bone marrow aspirations. They also have a separate credentialing exam.

The neonatal nurse practitioner

The third type of paediatric advanced practice nurse is the neonatal nurse practitioner (NNP). The NNP role was developed in the United States in the 1970s, along with the development in neonatology as a medical subspecialty. Since that time, NNPs have been an essential role in the care of sick neonates (Honeyfield, 2009). NNPs fall under the scope of acute care. Therefore, their practice setting is mainly in neonatal intensive care units (NICU). In addition, NNPs can work in neonatal transport and follow-up care units for NICU graduates, usually until the child is around two years old. NNPs also have similar roles as acute

care and primary care NPs, in that they must conduct physical examinations, diagnosis and provide treatment plans for patients. In addition, they must provide health education, immunizations, write prescriptions and coordinate patient care. However, these tasks are limited to the infant paediatric population. Similarly, the NNP must work and coordinate with an interdisciplinary team of medical professionals to provide comprehensive medical care to newborns (Freed, 2010).

Paediatric Nurse Practitioner Certification Board

Regardless of the specialty area, all nurse practitioners (NPs) must take a credentialing exam upon completion of their educational program. In order to begin practice, NPs in both Canada and the US must have certification from an accredited certifying body. All three paediatric specialties have their own certifying exam (American Academy of Nurse Practitioners, 2019). Prior to taking these exams however, all three subspecialties have similar requirements. The credentialing board for primary care and acute care PNPs is the Paediatric Nursing Certification Board (PNCB). Requirements to sit for the exam include an active registered nursing license, proof of graduation from an accredited college or university with at least a Master's degree in nursing that includes a minimum of five hundred direct care clinical hours in the specialty for which they are being certified. Also, they must have three separate courses in advanced pathophysiology, advanced health assessment and advanced pharmacology. Once these requirements are met, the NP is able to sit for the credentialing exam (PNCB, 2019a).

NNPs have separate requirements and credentialing body. Their credentialing body is known as the National Certification Corporation (NCC). In order to sit for a neonatal credentialing exam, NNPs also must have an active registered nursing license and have completed a master's in nursing from an accredited university. Additionally, they must have two years or two thousand hours of direct clinical practice time in a NICU. This information must be documented in order to be eligible to sit for the exam (National Certification Corporation,

2019). Upon passing the credentialing exam, the PNP is eligible to begin working in their chosen field.

NP's scope of practice

In the United States, the range of the scope of practice for the PNP varies based on the rules and regulations of the state where the provider works. As of 2019, NPs can practice independently and autonomously in 23 states and in the District of Columbia. In contrast, there are still many states where NPs have a more limited scope of practice and their work must be supervised and reviewed by a collaborating physician. Nonetheless, many states in the United States are moving in the direction that will allow NPs to be able to practice independently, a benefit to a healthcare system that is struggling with shortages of physicians in primary health care settings and the high cost of healthcare (AAMC, 2017; Perloff, 2015).

Conclusion

The role of the PNP is steadily evolving along with the healthcare needs of children across the globe. PNPs are an essential component of potential solutions that can mitigate physician shortages. This is especially true in underserved urban and rural populations, where many PNPs choose to practice. Additionally, the role of PNPs of all types is becoming increasingly important as health systems seek to improve efficiencies and reduce cost, especially in acute care settings. As increasing numbers of paediatric and adolescent patients are living with chronic conditions such as asthma, diabetes, hypertension, and depression, the role of the PNP as a commentary provider in paediatrics will become increasingly crucial (Martyn, 2013). With high scores for the patient and parental satisfaction (Kinder, 2016), demonstrated communication skills and clinical competence, the role of the PNP embodies a unique patient and family centered approach to care.

Source of support: None

Conflict of interest: None declared

Source of support in the form of grants: None

References

- American Association of Nurse Practitioners. (2019). NP certification: Recognize your education, skills and professional expertise. Retrieved from: <https://www.aanp.org/student-resources/np-certification>
- Association of American Medical Colleges (2017). The complexities of physician supply and demand: projections from 2015 – 2030. Retrieved from: https://aamc-black.global.ssl.fastly.net/production/media/filer_public/a5/c3/a5c3d565-14ec-48fb-974b-99fafaecb00/aamc_projections_update_2017.pdf
- Bucceri, A., Burke, A., Lee, L., & Spano, L. (2018). Pediatric Nurse Practitioner. Retrieved from <https://www.registerednursing.org/nurse-practitioner/pediatric/>
- Canadian Council of Registered Nurse Regulators (2016). Entry level competencies for nurse practitioners in Canada. Retrieved from: [https://www.crnmb.ca/uploads/ck/files/NP%20Entry%20Level%20Competencies%20-%20Final%20Draft%20-%20Aug%2026%202016-REV%20\(2\).pdf](https://www.crnmb.ca/uploads/ck/files/NP%20Entry%20Level%20Competencies%20-%20Final%20Draft%20-%20Aug%2026%202016-REV%20(2).pdf)
- Freed, G.L., Dunham, K.M., Lamarand, K.E., Cherry, C.L. & Martyn, K.K. (2010). Neonatal nurse practitioners: Distribution, roles and scope of practice. *Pediatrics*, 126(5); 856-860. DOI: 10.1542/peds.2010-1596.
- Ford, L. (1979). A nurse for all settings: The nurse practitioner. *Nursing Outlook*, 27, 516-521
- Hawkins-Walsh, E., Berg, M., Lindeke, L. & Osborn, K. (2011). A national survey of the primary and acute care pediatric nurse practitioner educational preparation. *Journal of Pediatric Health Care*, 25(1): 5-15. DOI: 10.1016/j.pedhc.2010.06.005.
- Honeyfield, M.E. (2009). Neonatal nurse practitioners: Past, present and future. *Advances in neonatal care*, 9(3); 125-128. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19542775>.
- Keeling, A., (May 31, 2015) "Historical Perspectives on an Expanded Role for Nursing" *OJIN: The Online Journal of Issues in Nursing* Vol. 20, No. 2, Manuscript
2. Retrieved from: <http://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-20-2015/No2-May-2015/Historical-Perspectives-Expanded-Role-Nursing.html>
- Kinder, F.D. (2016). Parents' perception of satisfaction with pediatric nurse practitioners' care and parental intent to adhere to the recommended healthcare regimen. *Pediatric Nursing*, 42(3). 138-144. Retrieved from <https://phstwp2.partners.org:3663/eds/pdfviewer/pdfviewer?vid=5&sid=bc316fd6-9f9c-4ad4-8689-8e67c76fb9cb%40pdc-v-sessmgr02>
- Martyn, K.K., Martin, J., Gutknecht, S. & Faleer, H. (2013). The pediatric nurse practitioner workforce: Meeting the health care needs of children. *Journal of pediatric healthcare*, 27(5): 400-405. DOI: <http://dx.doi.org/10.1016/j.pedhc.2013.03.005>
- National Certification Corporation. (2019). Certification examination core: RNC registered nurse certified. Retrieved from <https://www.nccwebsite.org/content/documents/cms/exam-core.pdf>
- Naylor, M.D. & Kurtzman, E.T. (2010). The role of nurse practitioners in reinventing primary care. *Health Affairs*, 29(5): 893-899. DOI: 10.1377/hlthaff.2010.0440.
- Parker, J. & Hill, M. (2017). A review of advanced practice nursing in the United States, Canada, Australia, and Hong Kong Special Administrative Region (SAR), China. *International Journal of Nursing Sciences*, 4, 2, 196-204. <https://doi.org/10.1016/j.ijnss.2017.01.002>
- Pediatric Nursing Certification Board. (2019a). *The primary care certified pediatric nurse practitioner (CPNP-PC)*. Retrieved from <https://www.pncb.org/cnpn-pc-role>.
- Pediatric Nursing Certification Board. (2019b). *The acute care certified pediatric nurse practitioner (CPNP-AC)*. Retrieved from <https://www.pncb.org/cnpn-ac-role>.
- Percy, M. S. & Sperhac, A. M. (2007). State regulations for the pediatric nurse practitioner in acute care. *Journal of pediatric healthcare*, 21(1): 29-43. DOI: 10.1016/j.pedhc.2006.08.005.

- Perloff, J. (2015). Comparing the cost of care provided to Medicare beneficiaries assigned to primary care nurse practitioners and physicians. *Health Services Research* 51, 4, 1475-6773.
- Pulcini, J. & Wagner, M. (2002). Nurse Practitioner Education in the United States: A Success Story. Clinical Excellence for Nurse Practitioners. 6.
- The Role of Pediatric Nurse Practitioners. *The Journal for Nurse Practitioners*, 6, 4, 313. DOI: [https://doi.org/10.1016/S1555-4155\(10\)00156-X](https://doi.org/10.1016/S1555-4155(10)00156-X)
- University of Washington, School of Nursing (2019). Pediatric nurse practitioner primary care. Retrieved from <https://nursing.uw.edu/programs/degree/dnp-pnp-pc/>
- Vanderbilt University, School of Nursing. (2019). Scope of practice. Retrieved from https://nursing.vanderbilt.edu/msn/pnppc/pnppc_scope.php
- Willhaus, J. (2010). The role of pediatric nurse practitioners. *The Journal for Nurse Practitioners*, 6(4). doi: [https://doi.org/10.1016/S1555-4155\(10\)00156-X](https://doi.org/10.1016/S1555-4155(10)00156-X)