

Caring for Children: A Review of Pediatric Nursing

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Abstract

Pediatric nursing is a specialized discipline that focuses on delivering comprehensive healthcare to neonates, infants, children, and adolescents. This review explores the evolution, roles, challenges, and future directions of pediatric nursing, emphasizing the need for age-appropriate and family-centered care. Beginning with its historical development, the article traces major milestones that have shaped pediatric nursing as a professional specialty. It highlights the critical roles pediatric nurses play—from clinical duties and communication to advocacy and ethical responsibilities. The review also outlines essential qualities such as empathy, cultural competence, and teamwork. Common pediatric health conditions and evidence-based nursing interventions are discussed alongside the diverse healthcare settings where pediatric nurses serve. The importance of family involvement, technological advancements, and simulation-based education in enhancing pediatric care are explored in detail. Current challenges, including emotional stress, communication barriers, and limited resources in low-income settings, are addressed with an emphasis on the need for ongoing professional development. As pediatric nursing continues to evolve, it remains central to improving child health outcomes through compassionate, skilled, and innovative practice..

Key words: Pediatric nursing, child healthcare, family-centered care, pediatric nurse roles, pediatric health conditions

INTRODUCTION

Definition of pediatric nursing

Pediatric nursing is a specialized branch of the nursing profession focused on the care of neonates, infants, children, and adolescents up to the age of 18 years or, in some settings, until young adulthood.^[1] The term “pediatric” derives from the Greek words *paidia* (child) and *iatrike* (physician), reflecting its roots in child health and medical treatment.^[2] Pediatric nurses are licensed healthcare professionals who have completed specialized education and clinical training to address the unique physical, emotional, and developmental needs of young patients.^[2]

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Importance of specialized care for children

Children are a vulnerable population with distinct physiological, psychological, and developmental characteristics that set them apart from adults. Their bodies respond differently to illness, medications, and medical interventions, and their limited verbal and cognitive abilities require age-appropriate communication and care strategies.^[3] Pediatric nurses play a crucial role in ensuring that children receive accurate assessments, tailored treatments, and compassionate support throughout their healthcare journey.^[4] The importance of specialized care is further underscored by the need to address not only the child’s health but also the well-being and involvement of their families, promoting a holistic, family-centered approach.^[5]

Purpose and scope of the review

This review aims to provide an overview of pediatric nursing by defining its scope, highlighting the importance of specialized care for children, and discussing the evolving trends and challenges in the field. The scope of pediatric nursing is broad, encompassing health promotion, disease prevention, diagnosis, treatment, and rehabilitation for children in various settings—including hospitals, clinics, schools, and community

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health centers.^[1] The review will also address the critical role of pediatric nurses in advocating for children's rights, supporting families, and collaborating with multidisciplinary teams to achieve optimal health outcomes.^[6]

HISTORICAL BACKGROUND OF PEDIATRIC NURSING

Evolution of pediatric nursing as a specialty

Pediatric nursing evolved from early informal caregiving practices to a recognized specialty within nursing. In ancient times, children were primarily cared for by their families using folk remedies and traditional medicine, with only the wealthy having access to physicians.^[7] The concept of specialized care for children began to develop in the late 19th century, influenced by pioneers like Abraham Jacobi, often called the "father of Pediatrics," who advocated for the scientific study and treatment of childhood diseases.^[6,7]

The establishment of dedicated children's hospitals marked a turning point. The first such hospital in the United States was founded in Philadelphia in 1855, with the aim of providing excellent care and reducing child mortality.^[2] This led to the creation of more children's hospitals in major cities across the country and Europe, each contributing to the advancement of pediatric care and the need for trained pediatric nurses.^[8]

Formal pediatric nursing education began to take shape in the early 20th century, with the inclusion of pediatric nursing in nursing curricula in 1917. The late 19th and early 20th centuries saw the rise of hospital-based nursing schools, which provided specialized training for nurses caring for children, especially those with communicable diseases. The first pediatric nursing textbook was published in 1923, further solidifying pediatric nursing as a distinct field.^[9]

Major milestones in pediatric healthcare

- 1855: The first children's hospital in the United States is established in Philadelphia.
- 1869–1879: Children's hospitals open in Boston, New York, San Francisco, Albany, Detroit, and St. Louis, expanding access to specialized pediatric care.^[10]
- 1895: The Children's Hospital of Philadelphia opens its own nursing school, addressing the need for trained pediatric nurses.
- 1917: Pediatric nursing is included as a formal subject in nursing education.
- 1923: The first pediatric nursing textbook is published.
- 1940s–1960s: Research highlights the importance of family involvement and the negative effects of maternal deprivation, leading to shifts toward family-centered care (FCC).
- 1964: The pediatric nurse practitioner movement begins, marking the start of advanced practice roles in pediatric nursing.
- 1980s–1990s: FCC becomes a central tenet of pediatric nursing, supported by policy changes and advocacy from healthcare leaders.

ROLES AND RESPONSIBILITIES OF PEDIATRIC NURSES

Daily clinical duties

Pediatric nurses are responsible for the comprehensive care of children from birth through adolescence. Their daily clinical duties include assessing a child's physical, emotional, and developmental needs; monitoring vital signs such as temperature, pulse, breathing, and blood pressure; and administering medications, treatments, and vaccinations according to age-appropriate guidelines. Pediatric nurses also perform diagnostic tests, interpret results, and adjust care plans based on the child's response to interventions. They are trained to recognize and respond to changes in symptoms, manage pain, and intervene in emergency situations.^[11]

Communication with children and families

Effective communication is foundational in pediatric nursing. Pediatric nurses interact with children using age-appropriate language and techniques to foster trust and reduce anxiety during medical procedures.^[2] They also serve as a vital link between the healthcare team and families, providing education about diagnoses, treatments, and home care management.^[12] Nurses address parental concerns, answer questions, and support families in coping with the stress of a child's illness or injury.^[13] By building rapport and offering emotional support, pediatric nurses help children and families navigate the healthcare system with confidence.^[10]

Advocacy and ethical responsibilities

Pediatric nurses act as advocates for their patients, ensuring that children's rights, preferences, and needs are respected throughout the care process. They play a key role in identifying signs of abuse or neglect and are obligated to report concerns to the appropriate authorities.^[14] Ethical responsibilities include maintaining confidentiality, obtaining informed consent from guardians, and promoting FCC—a model that recognizes the family as central to the child's well-being. Pediatric nurses also advocate for equitable access to healthcare and collaborate with interdisciplinary teams to ensure the best possible outcomes for their patients.^[15]

ESSENTIAL QUALITIES AND SKILLS OF A PEDIATRIC NURSE

Empathy and patience

Empathy and patience are foundational qualities for pediatric nurses. Children and their families often experience fear, anxiety, and uncertainty during medical encounters. Demonstrating empathy allows nurses to connect with children and parents, easing distress and building trust. Patience is equally vital, as pediatric nurses frequently manage uncooperative or frightened children, as well as anxious family members. These qualities help create a supportive environment and promote positive outcomes for young patients.^[16]

Communication and observation skills

Effective communication is essential for pediatric nurses, who must convey complex medical information in ways that

children and families can understand. This includes using age-appropriate language, listening actively to concerns, and providing reassurance. Strong observation skills are also critical, as children may not always be able to articulate their symptoms or discomfort. Pediatric nurses must be attuned to subtle changes in behavior, appearance, or vital signs to detect early warning signs of health issues and ensure timely intervention.^[16]

Cultural competence and teamwork

Cultural competence enables pediatric nurses to provide respectful and individualized care to children and families from diverse backgrounds. Understanding and respecting cultural beliefs, values, and practices helps nurses build rapport and deliver care that is sensitive to each family's needs. Teamwork is another essential skill, as pediatric nurses collaborate with physicians, therapists, social workers, and other healthcare professionals to develop comprehensive care plans. Working effectively as part of a multidisciplinary team ensures that all aspects of a child's health—physical, emotional, and developmental—are addressed.^[10]

COMMON PEDIATRIC HEALTH CONDITIONS AND NURSING INTERVENTIONS

Infectious diseases (e.g., Measles, Pneumonia)

Infectious diseases such as measles and pneumonia are prevalent in childhood and require prompt identification and management. Pediatric nurses assess symptoms such as fever, cough, rash, and respiratory distress, and monitor for complications like dehydration or secondary infections. Nursing interventions include:

- Infection control: Implementing isolation precautions and educating families about hand hygiene and disease prevention.^[17]
- Symptom management: Administering antipyretics, ensuring adequate hydration, and monitoring oxygen saturation in cases of pneumonia.
- Education: Teaching parents about immunization schedules, recognizing early signs of illness, and when to seek medical attention.^[7]
- Support: Providing emotional reassurance to both child and family during illness.

Chronic conditions (e.g., Asthma, Diabetes)

Chronic conditions such as asthma and type 1 diabetes require ongoing management and education. Pediatric nurses play a key role in:

- Assessment and monitoring: Regularly checking respiratory status in asthma (e.g., peak flow, oxygen saturation) and blood glucose levels in diabetes.^[18]
- Medication administration: Teaching families how to use inhalers, nebulizers, or insulin devices, and recognizing side effects or complications.
- Education: Providing information on disease management, recognizing emergencies (e.g., asthma attacks, hypoglycemia), and lifestyle modifications.

- Family support: Encouraging adherence to treatment plans and addressing the psychosocial needs of the child and family.

Acute care situations (e.g., Injury, Surgery Recovery)

In acute care settings, pediatric nurses manage children recovering from injuries or surgeries. Key interventions include:

- Pain management: Assessing pain using age-appropriate scales and administering analgesics as needed.^[19]
- Safety: Preventing falls, monitoring for complications, and ensuring a safe environment.
- Wound care: Cleaning and dressing surgical or traumatic wounds, and educating families about signs of infection.
- Rehabilitation: Encouraging mobility and self-care as tolerated, and providing support for emotional recovery.
- Family involvement: Facilitating family presence and participation in care decisions.

Growth and development monitoring

Monitoring growth and development is a fundamental aspect of pediatric nursing. Interventions include:

- Regular assessments: Tracking height, weight, head circumference (in infants), and developmental milestones.
- Early identification: Recognizing delays in physical, cognitive, or social development and referring for early intervention if needed.^[14]
- Parent education: Guiding nutrition, safety, and age-appropriate activities to promote healthy development.
- Support for special needs: Collaborating with families and multidisciplinary teams to optimize outcomes for children with developmental challenges.^[19]

PEDIATRIC NURSING IN DIFFERENT SETTINGS

Hospital-based pediatric care

Hospital-based pediatric care is a core setting for pediatric nurses, who work in multidisciplinary teams to provide comprehensive medical care for children ranging from newborns to adolescents. In these environments, nurses are responsible for acute and chronic disease management, post-surgical care, and monitoring for complications. They ensure a child-friendly environment, advocate for family involvement, and support children and parents through hospitalization. Hospital-based care often includes specialized units such as neonatal intensive care, pediatric wards, and emergency departments.

Community and home-based care

Community and home-based pediatric nursing focus on health promotion, disease prevention, and management of chronic conditions outside the hospital setting.^[20] Pediatric nurses conduct home visits, provide education on nutrition, hygiene, and medication management, and support families in caring for children with special healthcare needs. Community nurses also

collaborate with schools, social services, and other agencies to ensure continuity of care and address social determinants of health.^[1,7]

Pediatric intensive care units (PICU)

PICUs are specialized hospital settings for critically ill or injured children. Nurses in PICUs are highly skilled in advanced life support, complex monitoring, and rapid intervention for life-threatening conditions. They provide emotional support to families during crises, coordinate care with a multidisciplinary team, and ensure a safe, supportive environment for both patients and their families.^[2,1]

School health programs

School health programs are an important setting for pediatric nursing, focusing on preventive care, health education, and early detection of health problems. School nurses manage acute illnesses and injuries, administer medications, and monitor chronic conditions such as asthma and diabetes. They also promote healthy behaviors, support mental health, and serve as a bridge between families, healthcare providers, and educators. School nursing plays a key role in ensuring that children are healthy, safe, and ready to learn.^[1,7]

FCC IN PEDIATRIC NURSING

Engaging parents and guardians in care

FCC is a collaborative approach that recognizes the family as the child's primary source of strength and support. Pediatric nurses actively involve parents and guardians in all aspects of care, from decision-making to daily routines. This partnership is built on mutual respect, open communication, and shared goals for the child's well-being. Nurses value the unique insights and expertise of family members, acknowledging that parents know their child best and are essential partners in the healthcare team.^[5,6]

Education and counseling support

A core component of FCC is providing education and counseling to families. Pediatric nurses offer clear, age-appropriate information about the child's condition, treatment options, and home care requirements. They support families in understanding complex medical concepts, facilitating informed decision-making, and empowering parents to advocate for their child's needs. Counseling may also address emotional and psychological challenges, helping families cope with stress, uncertainty, and the impact of illness on daily life.^[4,6]

Coping with pediatric illness as a family unit

Pediatric illness affects not only the child but also the entire family system. FCC emphasizes holistic support, recognizing the importance of emotional, social, and developmental well-being for all family members. Nurses encourage open dialogue about concerns, provide resources for coping strategies, and foster resilience within the family unit. By supporting families through illness, hospitalization, and recovery, pediatric nurses help minimize trauma, promote adaptive coping, and enhance the overall quality of life for both the child and their loved ones.^[4,5]

CHALLENGES IN PEDIATRIC NURSING

Emotional stress and burnout

Pediatric nurses frequently experience emotional stress and burnout due to the nature of their work. Caring for sick or critically ill children, supporting grieving families, and managing end-of-life situations can be emotionally taxing.^[1] The constant need for empathy and compassion, coupled with long hours and high patient acuity, contributes to professional burnout and mental fatigue. Nurses may also feel frustration when unable to alleviate a child's suffering or when facing ethical dilemmas, such as conflicts between parental wishes and the child's best interests.^[1,6]

Communication barriers with children

Effective communication is essential but challenging in pediatric nursing. Children's developmental, cognitive, and language abilities vary widely, requiring nurses to adapt their communication strategies creatively.^[1,7] Non-verbal or pre-verbal children, such as infants or those with developmental delays, may not be able to express pain or discomfort, making accurate assessment difficult. In addition, cultural and language differences between families and healthcare providers can further complicate communication.

Technological and ethical issues

The rapid advancement of medical technology presents both opportunities and challenges. Pediatric nurses must stay updated on new equipment and procedures, which can be overwhelming and require continuous education.^[6] Ethical issues frequently arise, such as balancing parental autonomy with the child's best interests, respecting confidentiality, and making difficult decisions about end-of-life care. Nurses must navigate these dilemmas with sensitivity and professionalism.

Limited resources in low-income settings

Pediatric nurses in low-income environments often face significant resource limitations. These may include shortages of medical supplies, inadequate staffing, and limited access to specialized care. Children living in poverty are at higher risk for adverse health outcomes, and nurses may struggle to provide optimal care under these constraints.^[2] Resource scarcity can also hinder preventive health efforts, such as vaccination campaigns and health education.

ADVANCES AND INNOVATIONS IN PEDIATRIC NURSING

Use of technology in care and communication

Pediatric nursing is being transformed by a range of technological advancements. Artificial intelligence (AI) is increasingly utilized for diagnostics, predictive analytics, and personalized treatment planning, helping nurses deliver evidence-based, individualized care.^[4] Wearable biosensors and smart devices allow for continuous monitoring of vital signs, sleep patterns, and other health metrics, enabling early detection of complications and reducing guesswork in symptom assessment.^[2,1] Virtual reality (VR) is also being adopted to reduce pain and anxiety in children during

procedures, making hospital visits less stressful and more engaging.^[10] Electronic health records further streamline care by providing instant access to patient histories and facilitating better coordination among healthcare teams.^[17]

Telemedicine and pediatric E-health

Telemedicine has revolutionized pediatric care, especially for families in remote or underserved areas. Through video consultations, secure messaging, and digital health platforms, pediatric nurses can assess, diagnose, and monitor patients remotely, reducing the need for in-person visits and improving access to specialized care. Telemedicine supports real-time collaboration between primary care providers and pediatric specialists, ensuring timely interventions and comprehensive care management. Pediatric e-health initiatives also empower families by giving them access to digital health journals and educational resources, fostering greater involvement in their child's care.^[22]

Simulation-based training for pediatric nurses

Simulation-based training is a key innovation in pediatric nursing education. High-fidelity mannequins, VR scenarios, and interactive case studies allow nurses to practice clinical skills, critical thinking, and emergency responses in a risk-free environment. This approach enhances competency, confidence, and teamwork among pediatric nurses, preparing them to manage complex and high-stakes situations with greater proficiency. Simulation training also supports ongoing professional development and ensures that nurses are well-prepared for the evolving challenges of pediatric care.

CONCLUSION

Summary of key points

Pediatric nursing is a specialized field dedicated to the holistic care of children from infancy through adolescence, addressing both acute and chronic health conditions within diverse care settings. The evolution of pediatric nursing has been marked by significant milestones, including the development of dedicated children's hospitals, the establishment of advanced practice roles, and the adoption of FCC approaches. Pediatric nurses fulfill a wide range of responsibilities, from clinical care and patient education to advocacy and emotional support for children and their families.

Importance of continuous learning and empathy in pediatric nursing

The dynamic nature of pediatric healthcare demands that nurses remain committed to continuous learning and professional development. Advances in medical technology, evolving treatment protocols, and new research findings require pediatric nurses to stay informed and adapt their practices accordingly. Equally important is the cultivation of empathy and compassion, which are essential for building trust with children and families, alleviating anxiety, and fostering positive health outcomes. These qualities enable nurses to provide individualized, FCC, and support children through challenging health experiences.

Future directions in pediatric healthcare and nursing practice

Looking ahead, pediatric nursing will continue to evolve with innovations such as telemedicine, simulation-based training, and the integration of AI and digital health tools. There is a growing emphasis on preventive care, early intervention, and addressing the social determinants of health to reduce disparities in child health outcomes. The role of pediatric nurses is expanding to include greater involvement in research, policy advocacy, and leadership within healthcare systems. By embracing these future directions, pediatric nurses will play a pivotal role in shaping a healthier future for children worldwide.

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