



**National  
Association of  
Neonatal  
Nurses**

**Education Standards  
and Curriculum Guidelines  
for  
Neonatal Nurse Practitioner Programs**

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## Introduction

The hallmark of any profession is its members' commitment to high-quality service. In response to the expanded numbers and capabilities of advanced practice registered nurses (APRNs) in the last several decades, the APRN Consensus Work Group and the National Council of State Boards of Nursing (NCSBN) APRN Advisory Committee have presented an APRN regulatory model to increase the clarity and uniformity of APRN regulations. Their consensus report "defines APRN practice, describes the APRN regulatory model, identifies the titles to be used, defines specialty, describes the emergence of new roles and population foci, and presents strategies for implementation" (APRN Consensus Work Group & NCSBN APRN Advisory Committee, 2008).

Professional accountability begins with ensuring the quality of the educational programs that produce nurse providers. The purpose of this document is to define the minimum standards necessary for educating a neonatal nurse practitioner (NNP). The standards for NNP education are based on a foundation of the broad standards for advanced practice nursing (American Association of Colleges of Nursing [AACN], 1996, 2004a) and the evaluation criteria for nurse practitioner programs (National Task Force on Quality Nurse Practitioner Education, 2008). It is the responsibility of the professional organization for graduate nursing education to define the standards for advanced practice nursing. Further, it is the responsibility of the National Association of Neonatal Nurses Practitioners (NANNP), a division of the National Association of Neonatal Nurses (NANN), to define standards of education for the NNP.

These standards are to be used in conjunction with other accreditation or review tools for the evaluation of NNP educational programs or tracks. This will ensure that graduating NNPs receive appropriate instruction to function at the novice level. The document can also be used for the development and evaluation of new NNP programs and as a self-study tool for existing NNP programs.

This document represents a revision of the Education Standards and Curriculum Guidelines for Neonatal Nurse Practitioner Programs that was published by NANN in 2002 (NANN, 2002a, 2002b, 2002c). It reflects the latest guidelines and recommendations documented in the *Criteria for Evaluation of Nurse Practitioner Programs* (National Task Force on Quality Nurse Practitioner Education, 2008), the *Acute Care Nurse Practitioner Competencies* (National Panel for Acute Care Nurse Practitioner Competencies, 2004), the *Consensus Model for APRN Regulation* (APRN Consensus Work Group & NCSBN APRN Advisory Committee, 2008), the *Domains and Core Competencies of Nurse Practitioner Practice* (National Organization of Nurse Practitioner Faculties [NONPF], 2006), and *The Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2004a). To further inform the process from the perspective of our stakeholders, a survey of NNP program directors in the United States and Canada was completed and reviewed at the First Annual Faculty Forum at NANN's national conference in September 2008. In order to ensure the quality of nurse practitioner (NP) programs, facilitate evaluation and review of NP programs, and ensure compliance with education program recommendations, a Documentation Checklist and Sample Forms are provided in the *Criteria for Evaluation of Nurse Practitioner Programs* (National Task Force on Quality Nurse Practitioner Education, 2008).

Each of the following *program standard statements* is followed by an elaboration that provides important background or a rationale for the standard. The statement of the standard is identified by bold text.

## **I. Program Requirements**

### **The NNP education program**

- A. must be a formal neonatal nurse practitioner graduate or postgraduate (either post–master’s degree or postdoctoral) program that is awarded by an academic institution and accredited by a nursing or nursing-related accrediting organization recognized by the U.S. Department of Education or the Council for Higher Education Accreditation**
- B. must be awarded preapproval, preaccreditation, or accreditation status prior to the admission of students**
- C. must be comprehensive and at the graduate level**
- D. should prepare the graduate for specialty practice in the NNP role.**

### ***Elaboration***

Nurse practitioners are described by the American Academy of Nurse Practitioners (AANP) as “licensed independent practitioners who practice in ambulatory, acute and long term care as primary and/or specialty care providers. According to their practice specialty, NPs deliver nursing and medical services to individuals, families, and groups” (AANP, 2007).

AANP recommends that NPs complete a formal graduate education program and have a commitment to lifelong learning and professional self-development to ensure that they develop and maintain the appropriate understanding of theory and level of clinical skills. AANP clearly indicates that the graduate degree is needed for entry-level preparation and acknowledges that, although most NP programs award the master’s degree, the shift toward awarding doctoral degrees is increasing. This transition has occurred as a result of a 2004 recommendation by AACN that all advanced practice nurses be prepared at the doctoral level by 2015, “with the degree title of doctor of nursing practice, or DNP” (AACN, 2004b; AANP, 2007).

According to the *Consensus Model for APRN Regulation* (APRN Consensus Work Group & NCSBN APRN Advisory Committee, 2008), all APRN education programs must undergo a preapproval, preaccreditation, or accreditation process before students are admitted. The purpose of this process is to ensure that students graduating from the program will be eligible for national certification and licensure to practice and to ensure that programs meet all educational standards before they admit students.

## II. Practice Experience Requirements for Prospective Students

**The equivalent of 1 year of full-time, recent (within the last 5 years) practice experience as a registered nurse (RN) in the care of critically ill newborns, infants, or children in acute care, inpatient settings is required *before a student begins the clinical courses*. Students may enroll in preclinical courses while obtaining the necessary practice experience.**

### *Elaboration*

Although NANN recognizes that a solid foundation of basic RN practice is necessary before one assumes the advanced practice role of the NNP, critical thinking skills needed for the care of the critically ill neonate can be derived in practice settings other than the neonatal intensive care unit (NICU). *The required practice experience is limited to acute (intensive care) inpatient settings in the care of newborns, infants, or children. Required practice experience in the NICU is limited to Level III settings.*

Although it is ideal for prospective students to complete their RN practice experience before beginning graduate education, maintaining this position is not feasible in today's educational market. Appropriate RN experience in the care of critically ill newborns, infants, or children is essential *prior to beginning the clinical component of an NNP program.*

## III. Program Leadership

- A. **The director/coordinator of the NNP program must be a doctorally prepared nationally certified nurse practitioner. He or she has responsibility for overall leadership of the program.**
- B. **The lead NNP faculty member must be a nationally certified NNP holding at minimum a master's degree in nursing (a doctoral degree in nursing is preferred). She or he provides direct oversight for the NNP educational component or track.**
- C. **The program faculty member must be prepared at the graduate level and must maintain currency in clinical practice, licensure, and national certification as an NNP. She or he is responsible for development of the NNP role and clinical courses.**

### *Elaboration*

#### *Program Director/Coordinator*

The *program director/coordinator* must be doctorally prepared, should have a strong foundation in areas that support the responsibilities of leadership for the program (specialty knowledge, academic leadership, administration, and scholarship), and must be nationally certified in a particular NP population focus. She or he has academic oversight for the NNP program.

In programs with multiple tracks, although the program director/coordinator may be certified in only one population-focused area of practice, she or he is responsible for leadership of *all* the NP tracks (National Task Force on Quality Nurse Practitioner Education, 2008).

#### *Lead Faculty Member*

The *lead faculty member* must be a clinically competent, nationally certified NNP with a minimum of 2 years of NNP experience. She or he provides direct supervision for the NNP track, provides curriculum oversight for the specialty content of the NNP education program, and participates in the identification, development, teaching, and evaluation of the population-focused content for the advanced practice nursing core (advanced physiology and pathophysiology, health assessment, and pharmacology). She or he may work in collaboration with the program director/coordinator on the graduate nursing core (e.g., theory and research). The lead faculty member is responsible for the selection, evaluation, and counseling of students in the program and also participates in the ongoing evaluation of the program's resources and services.

Because of the trend toward viewing doctoral education as a requirement for entry into all advanced nursing practice, the lead faculty member ideally would be doctorally prepared. Given the current shortage of clinically competent, nationally certified NNPs with doctoral nursing education, NANN recognizes that it may not be feasible for all NNP programs to meet this standard at present. However, master's-prepared NNP faculty members who accept a lead faculty position should be expected to complete a doctoral degree in nursing within 5 years.

#### *Program Faculty*

Members of the program faculty must be prepared at the graduate level and must maintain currency in clinical practice, licensure, and national certification as an NNP (AANP, 2007). These faculty members are responsible for development of the NNP role and clinical courses, and one of their primary responsibilities is the development, implementation, and evaluation of the NNP program curriculum. They should also participate in the selection, evaluation, and counseling of students and in the ongoing evaluation of the program's resources and services.

Individuals providing didactic instruction should be drawn from the multidisciplinary team of providers caring for infants and their families. Participants should be determined according to the resources available to the program but should generally include NNPs, neonatologists, pediatric subspecialists, and allied health specialists. These faculty members should have the "preparation, knowledge and skills appropriate to their content areas" (AANP, 2007). The didactic and clinical presentations of participating faculty will be tailored to the individual needs of the students under the direction of the NNP faculty.

## **IV. Curriculum**

### **A. Didactic instruction**

- 1. The curriculum must include a minimum of 200 neonatal-specific, didactic clock hours.**

2. **The curriculum must include, at a minimum, three separate graduate-level core courses in the following areas:**
  - a. **Advanced physiology and pathophysiology, including general principles that apply across the lifespan**
  - b. **Advanced health assessment, including advanced assessment techniques, concepts, and approaches**
  - c. **Advanced pharmacology, including pharmacodynamics, pharmacokinetics, and pharmacotherapeutics of all broad categories of agents.**
3. **Specific neonatal content related to advanced physiology and pathophysiology, advanced health assessment, and advanced pharmacology should be included in the content of the above-mentioned core courses or integrated throughout the other neonatal-specific didactic and clinical courses.**

**B. Clinical instruction**

1. **The clinical component of the NNP curriculum must include a minimum of 600 precepted clock hours with critically ill newborns or infants in Level III NICUs.**
2. **Hours of observational experience may *not* be included in the minimum 600 hours.**
3. **Clinical or skills laboratory hours and clinical seminar hours may *not* be included in the minimum 600 hours.**
4. **Clinical experiences outside of the NICU (e.g., in antenatal, intrapartum, or primary care) may *not* be included in the minimum 600 hours.**

**C. Core content**

1. **The curriculum must contain sufficient content to enable program graduates to meet the Core Competencies for Neonatal Nurse Practitioner Practice. See Appendix A.**
2. **Recommended specialty content for NNP education programs is outlined in Appendix B. This content is organized according to the *Domains and Core Competencies of Nurse Practitioner Practice* (NONPF, 2006) and includes *The Essentials of Doctoral Education for***

***Advanced Nursing Practice (AACN, 2004a) and required competencies for DNP preparation.***

***Elaboration***

The curriculum design of individual NNP programs is the prerogative of the program faculty. Although NANN supports the program faculty's exercise of creativity in designing the NNP curriculum, it is essential that the curriculum plan meet all current standards, evaluation criteria, and guidelines that have been iterated previously in this document. Because many colleges of nursing that include NNP programs are trending toward offering the DNP as the only graduate degree, *The Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2004a) is referenced to provide program faculty with the specialty content needed to meet competencies for DNP preparation.

Clinical and didactic content related to primary care of the high-risk infant during the first 2 years of life should be included in the curriculum. This content should be offered in addition to the clinical and didactic hours required in the care of the high-risk neonate. This content provides students with a more holistic perspective on practice while enhancing role diversity and career opportunities.

**V. Preceptors and Clinical Sites**

**A. Preceptors**

- 1. Preceptors for the 600 clock hours in the NICU must be NNPs or board-certified neonatologists. NNP preceptors must be nationally certified, have the appropriate state licensure, have a minimum of 1 year full-time equivalent experience in the NNP role, and have a minimum of 1-year full-time equivalent employment at the clinical site. These requirements ensure that the preceptor at a given site has both the clinical expertise and the familiarity with the site necessary to provide supervision of the NNP students.**
- 2. The student-to-preceptor ratio should be such that individual learning is optimized. Therefore, the ratio of students to preceptors should not exceed 4:1.**
- 3. Preceptors for other clinical experiences (e.g., in antenatal, intrapartum, and primary care) must possess the clinical expertise necessary to provide safe guidance and appropriate education for the NNP students.**
- 4. Preceptors must be oriented to NNP program requirements and expectations for supervision and evaluation of the NNP students.**

**5. Preceptors must be evaluated annually for the purpose of ensuring the quality of the NNP students' learning experiences and defining preceptor relationships.**

***Elaboration***

Each student should be assigned a primary preceptor to coordinate the clinical experience. For the duration of the preceptorship, direct on-site supervision and consultation should be available from the NNP or neonatologist preceptor. The student-to-preceptor ratio should be such that individual learning is optimized. The recommended student-faculty ratio may vary according to the extent of clinical responsibilities for a patient caseload and whether the supervision of NNP students is direct or indirect. Direct supervision occurs when NNP faculty members serve as on-site clinical preceptors. Indirect supervision occurs when NNP faculty members share clinical teaching responsibilities with qualified preceptors, serve as a liaison to the community agency, and evaluate the NNP student's progress. The NNP faculty, however, has ultimate responsibility for the supervision and evaluation of students and for evaluation of the quality of the clinical learning environment (National Task Force on Quality Nurse Practitioner Education, 2008).

***Responsibilities of Clinical Preceptors***

1. Meet with the student prior to the preceptorship to discuss clinical objectives, schedules, and general guidelines. The preceptor should inform the student of any institutional orientation requirements. These should be completed prior to the beginning of the clinical experience.
2. Refer the student to any standardized procedures and management protocols applicable to unit management.
3. Assign an initial caseload of patients. Expansion of the caseload will depend on the evaluation of the student's readiness, knowledge, and skill level.
4. Permit the student to perform all the required management activities for assigned patients under appropriate supervision. These activities include, but are not limited to, the following:
  - a. Participating in resuscitation and stabilization of neonates in the delivery room
  - b. Admitting patients to the nursery, obtaining the perinatal and neonatal history, performing physical examinations, developing the differential diagnosis, and proposing the initial management plan
  - c. Providing ongoing management of infants in collaboration with the preceptor and revising the management plan based on the evaluation of the infant's progress
  - d. Performing diagnostic tests and procedures as dictated by the status and needs of the patient
  - e. Responding to emergency situations to stabilize an infant
  - f. Documenting the infant's clinical status, plan of care, and response to therapy in the medical record
  - g. Evaluating the need for consultations and requesting them
  - h. Facilitating an understanding of the infant's current and future healthcare needs and providing support to parents and staff

- i. Developing discharge plans and arranging and participating in postdischarge primary care
  - j. Participating in high-risk newborn transport if this service is available and if permitted by hospital protocol
  - k. Providing staff development by participating in educational programs.
5. Provide direct supervision when the student is involved in patient care. The preceptor should be available on-site for ongoing consultation and evaluation of the care delivered throughout the clinical experience.
  6. Review the student's documentation and make constructive suggestions for improvement.
  7. Meet with the student on an ongoing basis to discuss specific learning objectives and experiences. These meetings should focus on patient management and documentation, successful completion of procedures, comprehension of pathophysiology and management, interaction with staff and family, and role transition. Plans should be made for future learning experiences to meet the student's evolving learning needs. This information must be communicated to the NNP faculty in a timely manner throughout the clinical preceptorship.
  8. Evaluate the student. The preceptor must communicate with the student and the faculty member or program director. This should include written evaluation(s) of the student's performance furnished at specified intervals and upon completion of the preceptorship.
  9. Contact the program director or appropriate faculty member in a timely fashion with concerns or questions regarding the preceptor's ability to fulfill responsibilities or if there are problems concerning the student's performance.

#### *Responsibilities of Students*

1. Discuss specific clinical objectives, schedules, and general guidelines with the preceptor and faculty prior to the clinical rotation.
2. Provide the clinical site with the necessary documentation regarding licensure, health data, liability insurance, and educational information (curriculum vitae or résumé).
3. Observe the policies of the clinical site.
4. Adhere to the standards and scope of professional practice.
5. Communicate with the preceptor and faculty on clinical progress and learning needs.
6. Demonstrate independent learning, diagnostic reasoning skills, and the use of available resources.
7. Maintain and submit a log of clinical skills and activities.

8. Complete self-evaluations and evaluations of preceptor and clinical site as required.
9. Successfully complete the American Academy of Pediatrics/American Heart Association Neonatal Resuscitation Program prior to beginning the clinical preceptorship.

## **B. Clinical sites**

**Clinical sites should be diverse and sufficient in number to ensure that core curriculum guidelines can be observed and clinical objectives can be accomplished.**

1. **The clinical site should provide the student with the opportunity to manage a caseload of acutely ill newborns or infants including, but not limited to, those**
  - **requiring initial resuscitation and stabilization in the delivery room setting**
  - **weighing less than 1,000 grams**
  - **requiring mechanical ventilation**
  - **presenting with problems associated with prematurity**
  - **requiring diagnostic evaluation, stabilization, and management for a variety of medical and surgical conditions.**
2. **The clinical site should provide the student with the opportunity to attend and participate in rounds and other educational activities.**
3. **The clinical site should ensure that direct on-site supervision and consultation are available from the NNP or neonatologist preceptor.**
4. **Clinical sites should be evaluated annually to ensure the quality of the NNP student's learning experiences.**

### ***Elaboration***

The NNP lead faculty or clinical coordinator is responsible for evaluating the ability of the potential clinical sites to provide an optimal clinical experience for the student. During the clinical preceptorship, the student has no legal status as a nurse practitioner and must be supervised by an NNP or a neonatologist.

Additional topics that may need to be addressed prior to the beginning of the clinical preceptorship include liability insurance coverage, worker's compensation benefits, contracts or agreements between universities and clinical sites, and the relationship between the preceptor and the university. These matters must be clarified, because a wide variety in policies and practices exists. In the case of distance-learning programs, interstate and international policies may need elucidation.

Ideally, the clinical site would have established NNP role description, advanced practice procedures, and management protocols before the student's clinical experience begins. However,

this may not be possible if the preceptorship takes place in an NICU where there are no practicing NNPs. In this case the program director or faculty should be sure that this information is provided to the student in the didactic portion of the program.

#### *Responsibilities of Program Faculty*

1. Develop clinical and didactic portions of the NNP program, as outlined in the section on curriculum.
2. Provide the preceptor with the program objectives, outlines of didactic material, and the student's required reading list prior to the beginning of the clinical rotation.
3. Develop an evaluation process and the necessary forms to be used for formative and summative evaluation throughout and upon completion of the clinical preceptorship.
4. Consult with the student and preceptor to provide clarification of clinical objectives, activities, specific individual responsibilities, and requirements.
5. Give final approval of the student's clinical evaluation by the preceptor of record.

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## **Appendix A. Core Competencies for Neonatal Nurse Practitioner Practice**

**All neonatal nurse practitioners should be able to demonstrate these core competencies. These specialty competencies build upon the core competencies described by the National Organization for Nurse Practitioner Faculties (NONPF, 2006) in *Domains and Core Competencies of Nurse Practitioner Practice*.**

### **Domain 1: Management of Patient Health and Illness Status**

#### **Competencies**

**The neonatal nurse practitioner demonstrates competence in the management of patient health and illness status for newborns or infants and their families when she or he**

1. Applies current scientific knowledge to initiate change and improve care.
2. Applies principles of epidemiology and demography in clinical practice.
3. Obtains a health history that includes pertinent maternal medical, antepartum, intrapartum, and newborn history.
4. Performs a complete, systems-focused examination that includes physical, behavioral, and developmental assessments.
5. Distinguishes between normal, variations of normal, and abnormal findings, including developmental, physiologic, and behavioral states.
6. Employs screening and diagnostic strategies.
7. Develops a comprehensive database that includes pertinent history, diagnostic tests, and physical assessment.
8. Demonstrates critical thinking and diagnostic reasoning skills in clinical decision making.
9. Develops a differential diagnosis based on assessment data.
10. Formulates a diagnosis.
11. Establishes priorities of care.
12. Develops a plan of care based on scientific evidence and practice guidelines.

13. Prescribes medications with legal authorization.
14. Initiates therapeutic interventions according to established protocol and current standards of care.
15. Intervenes according to established clinical guidelines to resuscitate and stabilize a compromised infant.
16. Supports developmentally appropriate care.
17. Applies principles of pain management to care.
18. Applies end-of-life and palliative care principles to care.
19. Evaluates outcomes of care.
20. Documents assessment, plan, and outcomes of care.
21. Incorporates community needs, strengths, and resources into practice.
22. Communicates effectively using professional terminology, format, and technology.

## **Domain 2: The Nurse Practitioner–Patient Relationship**

### **Competencies**

#### **The neonatal nurse practitioner demonstrates competence in the nurse-patient relationship for newborns or infants and their families when she or he**

23. Communicates with family members and caregivers regarding the infant's healthcare status and needs.
24. Facilitates ethical decision making in collaboration with family members and other healthcare professionals.
25. Applies principles of crisis management to assist family members in coping with their infant's illness.
26. Functions as advocate for infants and families.

27. Respects the infant and family's inherent worth and dignity.
28. Uses self-reflection to further a therapeutic relationship.
29. Maintains professional boundaries.

### **Domain 3: The Teaching-Coaching Function**

#### **Competencies**

#### **The neonatal nurse practitioner demonstrates competence in the teaching-coaching function for newborns or infants and their families when she or he**

30. Assesses family adaptation, coping skills, educational needs, and resources.
31. Develops a personalized plan for learning.
32. Provides education and anticipatory guidance.
33. Evaluates outcomes of education.

### **Domain 4: Professional Role**

#### **Competencies**

#### **The neonatal nurse practitioner demonstrates competence in the professional role when she or he**

34. Participates in formal and informal education.
35. Integrates research to promote evidence-based practice for infants and families.
36. Contributes to research that promotes positive outcomes for infants and families.
37. Participates in professional organizations and activities related to advanced nursing practice.
38. Participates in professional organizations and activities that influence health outcomes of infants and their families.

39. Interprets the role of the neonatal nurse practitioner to the infant's family, other healthcare professionals, and the community.
40. Participates as a member of healthcare teams.
41. Collaborates with other healthcare providers.
42. Consults with other healthcare providers.
43. Evaluates implications of health policy.
44. Participates in policy-making activities.
45. Incorporates current technology.
46. Provides leadership.
47. Accepts personal responsibility for professional development.

## **Domain 5: Managing and Negotiating Healthcare Delivery Systems**

### **Competencies**

**The neonatal nurse practitioner demonstrates competence in managing and negotiating healthcare delivery systems for newborns or infants and their families when she or he**

48. Incorporates cost, efficacy, and quality when making decisions about care.
49. Demonstrates current knowledge of healthcare system financing as it affects delivery of care.
50. Analyzes organizational structure, functions, and resources to affect delivery of care.
51. Applies strategies of business and economics to improve care.
52. Advocates for development and implementation of healthcare policies that positively affect care.

## **Domain 6: Monitoring and Ensuring the Quality of Healthcare Practice**

### **Competencies**

**The neonatal nurse practitioner demonstrates competence in monitoring and ensuring the quality of healthcare practice for newborns or infants and their families when she or he**

53. Incorporates professional and legal standards into practice.
54. Participates in the development, review, and evaluation of neonatal nurse practitioner protocols.
55. Assumes accountability for practice.
56. Participates in the continuous quality improvement process.

## **Domain 7: Culturally Sensitive Care**

### **Competencies**

**The neonatal nurse practitioner demonstrates competence in providing culturally sensitive care for newborns or infants and their families when she or he**

57. Prevents personal biases from interfering with the delivery of high-quality care.
58. Incorporates cultural values, beliefs, and behaviors into the plan of care.
59. Assists families in meeting their spiritual needs.
60. Incorporates families' spiritual beliefs into care.

## Appendix B. Recommended Curriculum Content for Neonatal Nurse Practitioner (NNP) Programs

DNP Essentials	DNP Preparation	NANN NNP Core Competencies	NNP Curriculum Content
<p><b>Essential 1: Scientific Underpinnings for Practice</b></p> <p>The doctor of nursing practice (DNP) degree provides the terminal academic preparation for nursing practice. The scientific underpinnings of this education reflect the complexity of practice at the doctoral level and the rich heritage that is the conceptual foundation of nursing. The discipline of nursing is focused on</p> <ul style="list-style-type: none"> <li>• the principles and laws that govern the life process, well-being, and optimal function of human beings, sick or well</li> <li>• the patterning of human behavior in interaction with the environment in normal life events and critical life situations</li> <li>• the nursing actions or processes by which positive changes in health status are effected</li> <li>• the wholeness or health of human beings, in light of the recognition that they are in continuous interaction with their environments (Donaldson &amp; Crowley, 1978; Fawcett, 2005; Gortner, 1980).</li> </ul>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. integrate nursing science with knowledge from ethics and from the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice</li> <li>2. use science-based theories and concepts to <ul style="list-style-type: none"> <li>• determine the nature and significance of health and healthcare delivery phenomena</li> <li>• describe the actions and advanced strategies to enhance, alleviate, and ameliorate health and healthcare delivery phenomena as appropriate</li> <li>• evaluate outcomes</li> </ul> </li> <li>3. develop and evaluate new practice approaches based on nursing theories and theories from other disciplines.</li> </ol>	<p><b>All neonatal nurse practitioners should be able to demonstrate these core competencies at graduation. These specialty competencies build upon the core competencies described by NONPF (2006) in <i>Domains and Core Competencies of Nurse Practitioner Practice</i>.</b></p> <p><b>Domain 1: Management of Patient Health and Illness Status</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the management of patient health and illness status for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Applies current scientific knowledge to initiate change and improve care.</i></li> <li>• <i>Applies principles of epidemiology and demography in clinical practice.</i></li> <li>• <i>Obtains a health history that includes pertinent maternal medical, antepartum, intrapartum, and newborn history.</i></li> <li>• <i>Performs a complete, systems-focused examination that includes physical, behavioral, and developmental assessments.</i></li> <li>• <i>Distinguishes between normal, variations of normal, and abnormal findings, including developmental, physiologic, and behavioral states.</i></li> <li>• <i>Employs screening and diagnostic</i></li> </ul>	<p><b>Perinatal Issues</b></p> <p>A. Perinatal physiology</p> <ul style="list-style-type: none"> <li>• Maternal physiology (physiologic adaptation to pregnancy, pathologic changes or disease in pregnancy, effects of pre-existing disease)</li> <li>• Fetal physiology</li> <li>• Transitional changes</li> <li>• Neonatal physiology</li> </ul> <p>B. Pharmacology</p> <ul style="list-style-type: none"> <li>• Principles of pharmacology and pharmacotherapeutics, including those at the cellular response level</li> <li>• Principles of pharmacokinetics and pharmacodynamics of broad categories of drugs</li> <li>• Common categories of drugs used in the newborn and infant</li> <li>• Effects of drugs during pregnancy and lactation</li> </ul> <p>C. Genetics</p> <ul style="list-style-type: none"> <li>• Principles of human genetics</li> <li>• Genetic testing and screening</li> <li>• Genetic abnormalities</li> <li>• Human Genome Project</li> <li>• Gene therapy</li> </ul> <p><b>General Assessment</b></p> <ul style="list-style-type: none"> <li>• Perinatal history</li> <li>• Antepartum conditions</li> <li>• Prenatal diagnostic testing</li> <li>• Intrapartum conditions</li> <li>• Influence of altered environment on the newborn and infant</li> <li>• Gestational age assessment</li> </ul>

		<p><i>strategies.</i></p> <ul style="list-style-type: none"> <li>• <i>Develops a comprehensive database that includes pertinent history, diagnostic tests, and physical assessment.</i></li> <li>• <i>Demonstrates critical thinking and diagnostic reasoning skills in clinical decision making.</i></li> <li>• <i>Develops a differential diagnosis based on assessment data.</i></li> <li>• <i>Formulates a diagnosis.</i></li> <li>• <i>Establishes priorities of care.</i></li> <li>• <i>Develops a plan of care based on scientific evidence and practice guidelines.</i></li> <li>• <i>Prescribes medications with legal authorization.</i></li> <li>• <i>Initiates therapeutic interventions according to established protocol and current standards of care.</i></li> <li>• <i>Intervenes according to established clinical guidelines to resuscitate and stabilize a compromised infant.</i></li> <li>• <i>Supports developmentally appropriate care.</i></li> <li>• <i>Applies principles of pain management to care.</i></li> <li>• <i>Applies end-of-life and palliative care principles to care.</i></li> <li>• <i>Evaluates outcomes of care.</i></li> <li>• <i>Documents assessment, plan, and outcomes of care.</i></li> <li>• <i>Incorporates community needs, strengths, and resources into practice.</i></li> <li>• <i>Communicates effectively, using professional terminology, format, and technology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Neonatal physical exam</li> <li>• Behavioral assessment</li> <li>• Developmental assessment</li> <li>• Pain assessment</li> <li>• Assessment of family adaptation, coping skills, and resources</li> </ul> <p><b>Clinical and Diagnostic Laboratory Assessments</b></p> <p>Clinical laboratory tests</p> <ul style="list-style-type: none"> <li>• Microbiologic</li> <li>• Biochemical</li> <li>• Hematologic</li> <li>• Serologic</li> <li>• Metabolic and endocrine</li> <li>• Immunologic</li> <li>• Routine newborn screening</li> <li>• Other</li> </ul> <p>Diagnostic tests (types and techniques)</p> <ul style="list-style-type: none"> <li>• Ultrasound</li> <li>• Computed tomography (CT)</li> <li>• Magnetic resonance imaging (MRI), magnetic resonance angiogram (MRA), magnetic resonance spectroscopy (MRS)</li> <li>• X-ray</li> <li>• Electrocardiogram (EKG)</li> <li>• Electroencephalogram (EEG)</li> <li>• Echocardiogram</li> <li>• Cardiac catheterization</li> </ul> <p>Selection of diagnostic tests</p> <ul style="list-style-type: none"> <li>• Indications</li> <li>• Reliability</li> <li>• Advantages and disadvantages</li> <li>• Cost-effectiveness</li> <li>• Interpretation of results</li> </ul> <p>Neonatal procedures</p>
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			<ul style="list-style-type: none"> <li>• Lumbar puncture</li> <li>• Umbilical vessel catheterization</li> <li>• Percutaneous arterial and venous catheters</li> <li>• Arterial puncture</li> <li>• Venipuncture</li> <li>• Capillary heel-stick blood sampling</li> <li>• Suprapubic bladder aspiration</li> <li>• Bladder catheterization</li> <li>• Endotracheal intubation</li> <li>• Assisted ventilation</li> <li>• Resuscitation and stabilization</li> <li>• Needle aspiration of pneumothorax</li> <li>• Chest-tube insertion and removal</li> <li>• Exchange transfusion</li> </ul> <p><b>General Management</b></p> <p>A. Thermoregulation</p> <ul style="list-style-type: none"> <li>• Factors affecting heat loss and production</li> <li>• Mechanisms of heat loss and gain</li> <li>• Temperature assessment techniques</li> <li>• Hypothermia, hyperthermia</li> <li>• Management techniques to minimize heat loss or maintain body temperature</li> </ul> <p>B. Resuscitation and stabilization</p> <ul style="list-style-type: none"> <li>• Assessment of risk factors</li> <li>• Physiology of asphyxia</li> <li>• Indications for intubation, ventilation, and cardiac compressions (see also section on neonatal procedures)</li> <li>• Resuscitation equipment</li> <li>• Pharmacotherapeutics</li> <li>• Stabilization</li> <li>• Neonatal transport</li> <li>• Neonatal Resuscitation Program (NRP) provider</li> </ul> <p>C. Pain management</p>
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			<ul style="list-style-type: none"> <li>• Physiology of pain</li> <li>• Pain management             <ol style="list-style-type: none"> <li>1. Nonpharmacologic</li> <li>2. Pharmacologic</li> </ol> </li> </ul> <p>D. Palliative and end-of-life care</p> <ul style="list-style-type: none"> <li>• Ethical considerations</li> <li>• Pain management at end of life</li> <li>• Hospice care</li> <li>• Bereavement</li> </ul> <p><b>Clinical Management</b></p> <p>A. Cardiovascular system</p> <ul style="list-style-type: none"> <li>• Embryology</li> <li>• Physiology</li> <li>• Fetal, transitional, neonatal circulation</li> <li>• Rhythm disturbances/EKG interpretation</li> <li>• Myocardial dysfunction</li> <li>• Shock, hypotension, hypertension</li> <li>• Congenital heart disease (pathophysiology, clinical presentation, differential diagnosis, medical management, pre- and postoperative management)</li> <li>• Cardiovascular radiology and echocardiogram interpretation</li> <li>• Cardiovascular pharmacology</li> </ul> <p>B. Pulmonary system</p> <ul style="list-style-type: none"> <li>• Embryology</li> <li>• Physiology (oxygenation and ventilation, gas exchange, acid-base balance)</li> <li>• Asphyxia</li> <li>• Pulmonary diseases (pathophysiology, etiology, clinical presentation, differential diagnosis, treatment)</li> <li>• Pulmonary radiology</li> <li>• Respiratory therapy             <ol style="list-style-type: none"> <li>1. Physiologic principles</li> <li>2. Physiologic monitoring</li> </ol> </li> </ul>
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			<ul style="list-style-type: none"> <li>3. Continuous distending pressure</li> <li>4. Ventilation strategies</li> <li>5. Extracorporeal membrane oxygenation (ECMO)</li> <li>• Respiratory pharmacology</li> </ul> <p>C. Gastrointestinal (GI) system</p> <ul style="list-style-type: none"> <li>• Embryology</li> <li>• Anatomy and physiology of the GI tract <ul style="list-style-type: none"> <li>1. Structure and function</li> <li>2. Hormonal influence</li> <li>3. Motility</li> <li>4. Digestion and absorption</li> </ul> </li> <li>• Digestive and absorptive disorders <ul style="list-style-type: none"> <li>1. Disorders of sucking and swallowing</li> <li>2. Motility</li> <li>3. Gastroesophageal (GE) reflux</li> <li>4. Malabsorption</li> <li>5. Diarrhea or short gut</li> </ul> </li> <li>• Anomalies and obstruction</li> <li>• Necrotizing enterocolitis</li> </ul> <p>D. Nutrition</p> <ul style="list-style-type: none"> <li>• Effects of maturational changes on management of nutritional requirements and feeding</li> <li>• Caloric and nutritional requirements</li> <li>• Feeding methods <ul style="list-style-type: none"> <li>1. Breast</li> <li>2. Bottle</li> <li>3. Gavage</li> <li>4. Gastrostomy</li> <li>5. Transpyloric</li> <li>6. Trophic</li> </ul> </li> <li>• Breast milk versus formula <ul style="list-style-type: none"> <li>1. Composition</li> <li>2. Benefits</li> <li>3. Preterm infants</li> </ul> </li> <li>• Parenteral nutrition</li> </ul>
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			<ol style="list-style-type: none"> <li>1. Composition</li> <li>2. Indications</li> <li>3. Benefits</li> <li>4. Complications</li> <li>5. Monitoring</li> </ol> <ul style="list-style-type: none"> <li>• Dietary supplementation for term and preterm infants</li> <li>• Dietary adjustments in special circumstances <ol style="list-style-type: none"> <li>1. Cholestasis</li> <li>2. Short gut syndrome</li> <li>3. Osteopenia</li> <li>4. Inborn errors of metabolism</li> </ol> </li> </ul> <p>E. Renal and genitourinary</p> <ul style="list-style-type: none"> <li>• Embryology and anatomy</li> <li>• Renal physiology</li> <li>• Evaluation of renal function</li> <li>• Urinary tract infections</li> <li>• Congenital anomalies</li> <li>• Functional abnormalities of the renal system</li> <li>• Renal failure <ol style="list-style-type: none"> <li>1. Predisposing factors and etiologies</li> <li>2. Pathophysiology</li> <li>3. Management <ol style="list-style-type: none"> <li>a. Fluid and electrolytes</li> <li>b. Nutritional modification</li> <li>c. Drug modification</li> <li>d. Hemofiltration</li> <li>e. Dialysis</li> <li>f. Transplant</li> </ol> </li> </ol> </li> </ul> <p>F. Fluid and electrolytes</p> <ul style="list-style-type: none"> <li>• Physiology <ol style="list-style-type: none"> <li>1. Electrolyte homeostasis</li> <li>2. Body composition in fetal and neonatal periods</li> <li>3. Transitional changes</li> <li>4. Insensible water loss</li> </ol> </li> </ul>
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			<p>5. Endocrine control, (mineralocorticoids, antidiuretic hormone (ADH), calcitonin/parathyroid hormone (PTH))</p> <p>6. Renal function, physiology</p> <ul style="list-style-type: none"> <li>• Calcium and phosphorus homeostasis</li> <li>• Principles of fluid therapy       <ol style="list-style-type: none"> <li>1. Assessment of hydration</li> <li>2. Maintenance requirements</li> <li>3. Factors affecting total fluid requirements</li> </ol> </li> <li>• Disorders of fluids and electrolytes</li> <li>• Immune and nonimmune hydrops</li> </ul> <p>G. Endocrine and metabolic system</p> <ul style="list-style-type: none"> <li>• Neuroendocrine regulation</li> <li>• Carbohydrate metabolism</li> <li>• Infant of a diabetic mother</li> <li>• Adrenal disorders</li> <li>• Thyroid disorders</li> <li>• Inborn errors of metabolism</li> <li>• Newborn screening</li> <li>• Ambiguous genitalia, intersex disorders</li> </ul> <p>H. Hematologic system and malignancies</p> <ul style="list-style-type: none"> <li>• Development of the hematopoietic system</li> <li>• Anemia</li> <li>• Polycythemia and hyperviscosity</li> <li>• Bilirubin       <ol style="list-style-type: none"> <li>1. Physiology of bilirubin production, metabolism, and excretion</li> <li>2. Hyperbilirubinemia</li> <li>3. Breast milk jaundice</li> <li>4. Encephalopathy</li> </ol> </li> <li>• Hepatic disorders</li> <li>• Coagulation and platelets       <ol style="list-style-type: none"> <li>1. Physiology</li> <li>2. Disorders of coagulation and platelets</li> </ol> </li> <li>• Disorders of leukocytes</li> <li>• Blood transfusions and blood products</li> <li>• Malignancies, neoplasms</li> </ul>
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			<p>I. Immunologic system</p> <ul style="list-style-type: none"> <li>• Development of the immune system</li> <li>• Function of the immune system</li> <li>• Allo- and auto-immune disorders</li> <li>• Infectious diseases</li> <li>• Evaluation of the infant             <ol style="list-style-type: none"> <li>1. History</li> <li>2. Physical examination</li> <li>3. Laboratory data</li> <li>4. Other diagnostic tests</li> </ol> </li> <li>• Treatment             <ol style="list-style-type: none"> <li>1. Antimicrobial</li> <li>2. Adjunctive therapy</li> </ol> </li> <li>• Infection with specific microorganisms</li> </ul> <p>J. Musculoskeletal system</p> <ul style="list-style-type: none"> <li>• Embryology</li> <li>• Congenital abnormalities</li> <li>• Birth injuries             <ul style="list-style-type: none"> <li>▪ Metabolic bone disease</li> </ul> </li> </ul> <p>K. Neurobehavioral system</p> <ul style="list-style-type: none"> <li>• Development of the nervous system             <ol style="list-style-type: none"> <li>1. Embryology</li> <li>2. Anatomy</li> <li>3. Cerebral circulation</li> <li>4. Maturation</li> </ol> </li> <li>• Birth injuries</li> <li>• Anomalies and defects of central nervous system (CNS) and spine</li> <li>• Ischemic brain injury</li> <li>• Seizures</li> <li>• Intracranial hemorrhage</li> <li>• Disorders of movement and tone</li> <li>• Growth and development</li> <li>• Developmentally supportive care</li> <li>• Developmental follow-up of infants</li> </ul>
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			<p>L. Eyes, ears, nose, and throat</p> <ul style="list-style-type: none"> <li>• Embryology and anatomy</li> <li>• Abnormalities of the airway             <ol style="list-style-type: none"> <li>1. Congenital</li> <li>2. Acquired</li> </ol> </li> <li>• Auditory system             <ol style="list-style-type: none"> <li>1. Physiology of hearing and speech</li> <li>2. Speech and language alterations</li> <li>3. Hearing screening methods</li> <li>4. Abnormalities</li> </ol> </li> <li>• Visual system             <ol style="list-style-type: none"> <li>1. Physiology of vision and visual development</li> <li>2. Visual acuity</li> <li>3. Visual screening</li> <li>4. Pharmacotherapy</li> <li>5. Abnormalities</li> <li>6. Retinopathy of prematurity (ROP)</li> </ol> </li> </ul> <p>M. Integumentary system</p> <ul style="list-style-type: none"> <li>• Embryology</li> <li>• Anatomy and physiology</li> <li>• Terminology</li> <li>• Common variations</li> <li>• Skin disorders</li> <li>• Pharmacology</li> </ul> <p>N. Intrauterine drug exposure</p> <ul style="list-style-type: none"> <li>• Screening for maternal substance use</li> <li>• Laboratory tests</li> <li>• Ethical considerations</li> <li>• Physiologic effects</li> <li>• Clinical management             <ol style="list-style-type: none"> <li>1. Pharmacologic</li> <li>2. Nonpharmacologic</li> </ol> </li> </ul>
<p><b><i>Essential 2: Organizational and Systems Leadership for Quality Improvement and Systems Thinking</i></b></p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. develop and evaluate care delivery</li> </ol>	<p><b><i>Domain 5: Managing and Negotiating Healthcare Delivery Systems</i></b></p>	<p><b>Management and Organization</b></p> <ul style="list-style-type: none"> <li>• Organizational theory</li> <li>• Principles of management</li> </ul>

<p>The organizational and systems leadership of DNP graduates is critical to the improvement of patient and healthcare outcomes. Doctoral-level knowledge and skills in these areas are consistent with nursing and healthcare goals to eliminate health disparities and to promote patient safety and excellence in practice.</p> <p>DNP graduates' practice includes not only direct care but also a focus on the needs of a panel of patients, a target population, a set of populations, or a broad community. These graduates are distinguished by their abilities to conceptualize new care delivery models that are based in contemporary nursing science and that are feasible within current organizational, political, cultural, and economic perspectives.</p>	<p>approaches that meet current and future needs of patient populations based on scientific findings in nursing and other clinical sciences, as well as organizational, political, and economic sciences</p> <ol style="list-style-type: none"> <li>2. ensure accountability for quality of health care and patient safety for populations with whom they work</li> <li>3. use advanced communication skills and processes to <ul style="list-style-type: none"> <li>• lead quality improvement and patient safety initiatives in healthcare systems</li> <li>• employ principles of business, finance, economics, and health policy to develop and implement effective plans for practice-level and/or systemwide practice initiatives that will improve the quality of care delivery</li> <li>• develop and/or monitor budgets for practice initiatives</li> <li>• analyze the cost-effectiveness of practice initiatives accounting for risk and improvement of healthcare outcomes</li> <li>• demonstrate sensitivity to diverse organizational cultures and populations, including patients and providers</li> </ul> </li> <li>4. develop and/or evaluate effective strategies for managing the ethical dilemmas inherent in patient care, the healthcare organization, and research.</li> </ol>	<p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in managing and negotiating healthcare delivery systems for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Incorporates cost, efficacy, and quality when making decisions about care.</i></li> <li>• <i>Demonstrates current knowledge of healthcare system financing as it affects delivery of care.</i></li> <li>• <i>Analyzes organizational structure, functions, and resources to affect delivery of care.</i></li> <li>• <i>Applies strategies of business and economics to improve care.</i></li> <li>• <i>Advocates for development and implementation of healthcare policies that positively affect care.</i></li> </ul> <p><b>Domain 6: Monitoring and Ensuring the Quality of Healthcare Practice</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in monitoring and ensuring the quality of healthcare practice for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Incorporates professional and legal standards into practice.</i></li> <li>• <i>Participates in the development, review, and evaluation of neonatal nurse practitioner protocols.</i></li> <li>• <i>Assumes accountability for practice.</i></li> <li>• <i>Participates in the continuous quality improvement process.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Models of planned change</li> <li>• Continuous quality improvement</li> <li>• Collaborative practice</li> <li>• Healthcare system financing</li> <li>• Reimbursement systems</li> <li>• Standards of practice</li> <li>• Cost, quality, outcome measures</li> <li>• Resource management</li> <li>• Evaluation models</li> <li>• Peer review</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication theory</li> <li>• Collaboration</li> <li>• Conflict resolution</li> <li>• Assertiveness</li> <li>• Collaborative practice models</li> <li>• Informatics</li> <li>• Consultation</li> </ul> <p><b>Ethical and Legal Issues</b></p> <ul style="list-style-type: none"> <li>• Ethical decision making</li> <li>• Ethical issues—reproductive, prenatal, neonatal, and infancy</li> <li>• Ethical use of information</li> <li>• Patient advocacy</li> <li>• Bioethics committees</li> <li>• Clinical research</li> <li>• Resource allocation</li> <li>• Genetic counseling</li> <li>• Legal issues affecting patient care and professional practice</li> <li>• Informed consent</li> <li>• Cultural sensitivity</li> </ul> <p><b>Healthcare Policy and Advocacy</b></p> <ul style="list-style-type: none"> <li>• Process of healthcare legislation</li> <li>• Maternal and child health legislation</li> </ul>
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<p><b>Essential 3: Clinical Scholarship and Analytical Methods for Evidence-Based Practice</b></p> <p>Scholarship and research are the hallmarks of doctoral education. Although basic research has been viewed as the first and most essential form of scholarly activity, an enlarged perspective on scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge (Boyer, 1990). These paradigms recognize that (1) the scholarship of discovery and integration “reflects the investigative and synthesizing traditions of academic life” (Boyer, p. 21); (2) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration; and (3) scholars apply knowledge to solve a problem via the scholarship of application (referred to as the scholarship of practice in nursing). This application involves the translation of research into practice and the dissemination and integration of new knowledge, which are key activities of DNP graduates. The scholarship of application expands the realm of knowledge beyond mere discovery and directs it toward humane ends. Nursing practice epitomizes the scholarship of application through its position where the</p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. use analytic methods to critically appraise existing literature and other evidence to determine and implement the best evidence for practice</li> <li>2. design and implement processes to evaluate outcomes of practice, practice patterns, and systems of care within a practice setting, healthcare organization, or community against national benchmarks to determine variances in practice outcomes and population trends</li> <li>3. design, direct, and evaluate quality improvement methodologies to promote safe, timely, effective, efficient, equitable, and patient-centered care</li> <li>4. apply relevant findings to develop practice guidelines and improve practice and the practice environment</li> <li>5. use information technology and research methods appropriately to <ul style="list-style-type: none"> <li>• collect appropriate and accurate data to generate evidence for nursing practice</li> <li>• inform and guide the design of databases that generate meaningful evidence for nursing practice</li> <li>• analyze data from practice</li> <li>• design evidence-based interventions</li> </ul> </li> </ol>	<p><b>Domain 4: Professional Role</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the professional role when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Participates in formal and informal education.</i></li> <li>• <i>Integrates research to promote evidence-based practice for infants and families.</i></li> <li>• <i>Contributes to research that promotes positive outcomes for infants and families.</i></li> <li>• <i>Participates in professional organizations and activities related to advanced nursing practice.</i></li> <li>• <i>Participates in professional organizations and activities that influence health outcomes of infants and their families.</i></li> <li>• <i>Interprets the role of the neonatal nurse practitioner to the infant’s family, other healthcare professionals, and the community.</i></li> <li>• <i>Participates as a member of healthcare teams.</i></li> <li>• <i>Collaborates with other healthcare providers.</i></li> <li>• <i>Consults with other healthcare providers.</i></li> <li>• <i>Evaluates implications of health</i></li> </ul>	<p><b>Professional Role</b></p> <ul style="list-style-type: none"> <li>• Professional leadership</li> <li>• Professional accountability</li> <li>• Information technology</li> <li>• Evidence-based practice</li> <li>• Role theory</li> <li>• Nursing theories</li> <li>• Advanced practice role</li> <li>• Role of the NNP</li> <li>• Scope of practice of the NNP</li> <li>• Standards of practice</li> <li>• Professional regulation and licensure</li> <li>• Credentialing and certification</li> <li>• Clinical decision making and problem solving</li> <li>• Professional scholarship</li> </ul> <p><b>Research</b></p> <ul style="list-style-type: none"> <li>• Research process and methods</li> <li>• Information databases</li> <li>• Critical evaluation of research findings</li> <li>• Translational research</li> <li>• Research on vulnerable populations</li> <li>• Funding for research</li> <li>• Research dissemination</li> <li>• Institutional review boards</li> <li>• Genetic counseling</li> </ul>

<p>sciences, human caring, and human needs meet and new understandings emerge.</p>	<ul style="list-style-type: none"> <li>• predict and analyze outcomes</li> <li>• examine patterns of behavior and outcomes</li> <li>• identify gaps in evidence for practice</li> </ul> <p>6. function as a practice specialist or consultant in collaborative knowledge-generating research</p> <p>7. disseminate findings from evidence-based practice and research to improve healthcare outcomes.</p>	<p><i>policy.</i></p> <ul style="list-style-type: none"> <li>• <i>Participates in policy-making activities.</i></li> <li>• <i>Incorporates current technology.</i></li> <li>• <i>Provides leadership.</i></li> <li>• <i>Accepts personal responsibility for professional development.</i></li> </ul>	
<p><b>Essential 4: Information Systems and Technology and Patient Care</b>  <b>Technology for the Improvement and Transformation of Health Care</b>  DNP graduates are distinguished by their abilities to use information systems and technology to support and improve patient care and healthcare systems and provide leadership within healthcare systems or academic settings. Knowledge and skills related to information systems and technology and patient care technology prepare the DNP graduate to apply new knowledge, manage individual and aggregate-level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice. DNP graduates also design, select, and use information systems and technology to evaluate programs of care, outcomes of care, and care systems. Information systems and technology provide a mechanism to apply budget and productivity tools, practice information systems and decision supports, and Web-based learning or intervention tools to support and improve patient care.</p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. design, select, use, and evaluate programs that evaluate and monitor outcomes of care, care systems, and quality improvement, including consumer use of healthcare information systems</li> <li>2. analyze and communicate critical elements necessary to the selection, use, and evaluation of healthcare information systems and patient care technology</li> <li>3. demonstrate the conceptual ability and technical skills to develop and execute an evaluation plan involving data extraction from practice information systems and databases</li> <li>4. provide leadership in the evaluation and resolution of ethical and legal issues within healthcare systems relating to the use of information, information technology, communication networks, and patient care technology</li> </ol>	<p><b>Domain 4: Professional Role</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the professional role when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Participates in formal and informal education.</i></li> <li>• <i>Integrates research to promote evidence-based practice for infants and families.</i></li> <li>• <i>Contributes to research that promotes positive outcomes for infants and families.</i></li> <li>• <i>Participates in professional organizations and activities related to advanced nursing practice.</i></li> <li>• <i>Participates in professional organizations and activities that influence health outcomes of infants and their families.</i></li> <li>• <i>Interprets the role of the neonatal nurse practitioner to the infant’s family, other healthcare professionals, and the community.</i></li> <li>• <i>Participates as a member of healthcare teams.</i></li> <li>• <i>Collaborates with other healthcare providers.</i></li> </ul>	<p><b>Professional Role</b></p> <ul style="list-style-type: none"> <li>• Professional leadership</li> <li>• Professional accountability</li> <li>• Information technology</li> <li>• Evidence-based practice</li> <li>• Role theory</li> <li>• Nursing theories</li> <li>• Advanced practice role</li> <li>• Role of the NNP</li> <li>• Scope of practice of the NNP</li> <li>• Standards of practice</li> <li>• Professional regulation and licensure</li> <li>• Credentialing and certification</li> <li>• Clinical decision making and problem solving</li> <li>• Professional organizations</li> <li>• Professional scholarship</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication theory</li> <li>• Collaboration</li> <li>• Conflict resolution</li> <li>• Assertiveness</li> <li>• Collaborative practice models</li> <li>• Informatics</li> <li>• Consultation</li> </ul> <p><b>Ethical and Legal Issues</b></p> <ul style="list-style-type: none"> <li>• Ethical decision making</li> </ul>

	<p>5. evaluate consumer health information sources for accuracy, timeliness, and appropriateness.</p>	<ul style="list-style-type: none"> <li>• <i>Consults with other healthcare providers.</i></li> <li>• <i>Evaluates implications of health policy.</i></li> <li>• <i>Participates in policy-making activities.</i></li> <li>• <i>Incorporates current technology.</i></li> <li>• <i>Provides leadership.</i></li> <li>• <i>Accepts personal responsibility for professional development.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Ethical issues—reproductive, prenatal, neonatal, and infancy</li> <li>• Ethical use of information</li> <li>• Patient advocacy</li> <li>• Bioethics committees</li> <li>• Clinical research</li> <li>• Resource allocation</li> <li>• Genetic counseling</li> <li>• Legal issues affecting patient care and professional practice</li> <li>• Informed consent</li> <li>• Cultural sensitivity</li> </ul>
<p><b>Essential 5: Healthcare Policy for Advocacy in Health Care</b> Healthcare policy—whether it is created through governmental actions, institutional decision making, or organizational standards—creates a framework that can facilitate or impede the delivery of healthcare services or the ability of the provider to engage in practice to address healthcare needs. Thus, engagement in the process of policy development is central to creating a healthcare system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of professional nursing practice, and the DNP graduate has the ability to assume a broad leadership role on behalf of the public as well as the nursing profession (Ehrenreich, 2002). Health policy influences multiple care delivery issues, including health disparities, cultural sensitivity, ethics, the internationalization of healthcare concerns, access to care, quality of care, healthcare financing, and issues of equity</p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. critically analyze health policy proposals, health policies, and related issues from the perspective of consumers, nurses, other health professionals, and other stakeholders in policy and public forums.</li> <li>2. demonstrate leadership in the development and implementation of institutional, local, state, federal, and/or international health policy.</li> <li>3. influence policy makers through active participation on committees, boards, or task forces at the institutional, local, state, regional, national, and/or international levels to improve healthcare delivery and outcomes.</li> <li>4. educate others, including policy makers at all levels, regarding nursing, health policy, and patient care outcomes.</li> </ol>	<p><b>Domain 2: The Nurse Practitioner–Patient Relationship</b></p> <p><b>Competencies</b> <i>The neonatal nurse practitioner demonstrates competence in the nurse-patient relationship for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Communicates with family members and caregivers regarding the infant’s healthcare status and needs.</i></li> <li>• <i>Facilitates ethical decision making in collaboration with family members and other healthcare professionals.</i></li> <li>• <i>Applies principles of crisis management to assist family members in coping with their infant’s illness.</i></li> <li>• <i>Functions as advocate for infants and families.</i></li> <li>• <i>Respects the infant and family’s inherent worth and dignity.</i></li> <li>• <i>Uses self-reflection to further a therapeutic relationship.</i></li> <li>• <i>Maintains professional boundaries.</i></li> </ul>	<p><b>Healthcare Policy and Advocacy</b></p> <ul style="list-style-type: none"> <li>• Process of healthcare legislation</li> <li>• Maternal and child health legislation</li> <li>• Implications of healthcare policy</li> <li>• Economics of health care</li> <li>• Third-party reimbursement</li> <li>• Legislation and regulations concerning advanced practice</li> <li>• Advocacy</li> </ul> <p><b>Teaching and Education</b></p> <ul style="list-style-type: none"> <li>• Theories—motivational, change, education, communication</li> <li>• Program planning and evaluation</li> <li>• Instructional technology</li> <li>• Cultural sensitivity</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication theory</li> <li>• Collaboration</li> <li>• Conflict resolution</li> <li>• Assertiveness</li> <li>• Collaborative practice models</li> <li>• Informatics</li> <li>• Consultation</li> </ul>

<p>and social justice in the delivery of health care.</p>	<ol style="list-style-type: none"> <li>5. advocate for the nursing profession within the policy and healthcare communities.</li> <li>6. develop, evaluate, and provide leadership for healthcare policy that shapes healthcare financing, regulation, and delivery.</li> <li>7. advocate for social justice, equity, and ethical policies within all healthcare arenas.</li> </ol>	<p><b>Domain 3: The Teaching-Coaching Function</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the teaching-coaching function for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Assesses family adaptation, coping skills, educational needs, and resources.</i></li> <li>• <i>Develops a personalized plan for learning</i></li> <li>• <i>Provides education and anticipatory guidance.</i></li> <li>• <i>Evaluates outcomes of education.</i></li> </ul>	<p><b>Ethical and Legal Issues</b></p> <ul style="list-style-type: none"> <li>• Ethical decision making</li> <li>• Ethical issues—reproductive, prenatal, neonatal, and infancy</li> <li>• Ethical use of information</li> <li>• Patient advocacy</li> <li>• Bioethics committees</li> <li>• Clinical research</li> <li>• Resource allocation</li> <li>• Genetic counseling</li> <li>• Legal issues affecting patient care and professional practice</li> <li>• Informed consent</li> <li>• Cultural sensitivity</li> </ul>
<p><b>Essential 6: Interprofessional Collaboration for Improving Patient and Population Health Outcomes</b>          Today’s complex, multitiered healthcare environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. In order to accomplish the Institute of Medicine mandate for safe, timely, effective, efficient, equitable, and patient-centered care in a complex environment, healthcare professionals must function as highly collaborative teams (AACN, 2004a; Institute of Medicine, 2003; O’Neil &amp; Pew Health Professions Commission, 1998). DNP members of these teams have advanced preparation in the interprofessional dimension of health care that enables them to facilitate collaborative team functioning and overcome impediments</p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. employ effective communication and collaborative skills in the development and implementation of practice models, peer review, practice guidelines, health policy, standards of care, and/or other scholarly products.</li> <li>2. lead interprofessional teams in the analysis of complex practice and organizational issues.</li> <li>3. employ consultative and leadership skills with intraprofessional and interprofessional teams to create change in health care and complex healthcare delivery systems.</li> </ol>	<p><b>Domain 4: Professional Role</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the professional role when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Participates in formal and informal education.</i></li> <li>• <i>Integrates research to promote evidence-based practice for infants and families.</i></li> <li>• <i>Contributes to research that promotes positive outcomes for infants and families.</i></li> <li>• <i>Participates in professional organizations and activities related to advanced nursing practice.</i></li> <li>• <i>Participates in professional organizations and activities that influence health outcomes of infants and their families.</i></li> </ul>	<p><b>Professional Role</b></p> <ul style="list-style-type: none"> <li>• Professional leadership</li> <li>• Professional accountability</li> <li>• Information technology</li> <li>• Evidence-based practice</li> <li>• Role theory</li> <li>• Nursing theories</li> <li>• Advanced practice role</li> <li>• Role of the NNP</li> <li>• Scope of practice of the NNP</li> <li>• Standards of practice</li> <li>• Professional regulation and licensure</li> <li>• Credentialing and certification</li> <li>• Clinical decision making and problem solving</li> <li>• Professional scholarship</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication theory</li> <li>• Collaboration</li> <li>• Conflict resolution</li> </ul>

<p>to interprofessional practice. Because effective interprofessional teams function in a highly collaborative fashion and are fluid, depending upon patients' needs, leadership of high-performance teams changes. Therefore, DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.</p>		<ul style="list-style-type: none"> <li>• <i>Interprets the role of the neonatal nurse practitioner to the infant's family, other healthcare professionals, and the community.</i></li> <li>• <i>Participates as a member of healthcare teams.</i></li> <li>• <i>Collaborates with other healthcare providers.</i></li> <li>• <i>Consults with other healthcare providers.</i></li> <li>• <i>Evaluates implications of health policy.</i></li> <li>• <i>Participates in policy-making activities.</i></li> <li>• <i>Incorporates current technology.</i></li> <li>• <i>Provides leadership.</i></li> <li>• <i>Accepts personal responsibility for professional development.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Assertiveness</li> <li>• Collaborative practice models</li> <li>• Informatics</li> <li>• Consultation</li> </ul> <p><b>Research</b></p> <ul style="list-style-type: none"> <li>• Research process and methods</li> <li>• Information databases</li> <li>• Critical evaluation of research findings</li> <li>• Translational research</li> <li>• Research on vulnerable populations</li> <li>• Funding for research</li> <li>• Research dissemination</li> <li>• Institutional review boards</li> </ul>
<p><b>Essential 7: Clinical Prevention and Population Health for Improving the Nation's Health</b>  <i>Clinical prevention</i> is defined as health promotion, risk reduction, and illness prevention for individuals and families. <i>Population health</i> is defined to include aggregate, community, environmental and occupational, and cultural and socioeconomic dimensions of health. <i>Aggregates</i> are groups of individuals defined by a shared characteristic such as gender, diagnosis, or age. These framing definitions are endorsed by representatives of multiple disciplines, including nursing (Allan et al., 2004).</p> <p>The implementation of clinical prevention and population health activities is central to achieving the national goal of improving the health</p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. analyze epidemiological, biostatistical, environmental, and other appropriate scientific data related to individual, aggregate, and population health.</li> <li>2. synthesize concepts, including psychosocial dimensions and cultural diversity, related to clinical prevention and population health in developing, implementing, and evaluating interventions to address health promotion and disease prevention efforts, improve health status and access patterns, and/or address gaps in care of individuals, aggregates, or populations.</li> <li>3. evaluate care delivery models and strategies using concepts related to</li> </ol>	<p><b>Domain 2: The Nurse Practitioner–Patient Relationship</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the nurse-patient relationship for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Communicates with family members and caregivers regarding the infant's healthcare status and needs.</i></li> <li>• <i>Facilitates ethical decision making in collaboration with family members and other healthcare professionals.</i></li> <li>• <i>Applies principles of crisis management to assist family members in coping with their infant's illness.</i></li> <li>• <i>Functions as advocate for infants</i></li> </ul>	<p><b>Sociocultural Assessment</b></p> <p>A. Family assessment</p> <ul style="list-style-type: none"> <li>• Family function <ol style="list-style-type: none"> <li>1. roles</li> <li>2. interactions</li> <li>3. effect of childbearing</li> </ol> </li> <li>• Social, cultural, and spiritual variations</li> <li>• Support systems</li> </ul> <p>B. Families in crisis</p> <ul style="list-style-type: none"> <li>• Crisis theory</li> <li>• Principles of intervention</li> <li>• Crises of childbearing <ol style="list-style-type: none"> <li>1. sick or premature infant</li> <li>2. chronically ill or malformed infant</li> <li>3. death of an infant</li> </ol> </li> <li>• Grief <ol style="list-style-type: none"> <li>1. stages</li> <li>2. factors influencing grieving process</li> <li>3. pathological grief</li> </ol> </li> </ul>

<p>status of the population of the United States. Unhealthy lifestyle behaviors account for more than 50 percent of preventable deaths in the United States, yet prevention interventions are underutilized in healthcare settings. In an effort to address this national goal, <i>Healthy People 2010</i> supported the transformation of clinical education by creating an objective to increase the proportion of schools of medicine, nursing, and other fields in the health professions that have a basic curriculum that includes core competencies in health promotion and disease prevention (Allan et al., 2004; U.S. Department of Health and Human Services, 2000).</p> <p>DNP graduates engage in leadership to integrate and institutionalize evidence-based clinical prevention and population health services for individuals, aggregates, and populations.</p>	<p>community, environmental and occupational health, and cultural and socioeconomic dimensions of health.</p>	<p><i>and families.</i></p> <ul style="list-style-type: none"> <li>• <i>Respects the infant and family's inherent worth and dignity</i></li> <li>• <i>Uses self-reflection to further a therapeutic relationship.</i></li> <li>• <i>Maintains professional boundaries.</i></li> </ul> <p><b>Domain 3: The Teaching-Coaching Function</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in the teaching-coaching function for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Assesses family adaptation, coping skills, educational needs, and resources.</i></li> <li>• <i>Develops a personalized plan for learning</i></li> <li>• <i>Provides education and anticipatory guidance.</i></li> <li>• <i>Evaluates outcomes of education.</i></li> </ul> <p><b>Domain 7: Culturally Sensitive Care</b></p> <p><b>Competencies</b>  <i>The neonatal nurse practitioner demonstrates competence in providing culturally sensitive care for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Prevents personal biases from interfering with the delivery of high-quality care.</i></li> <li>• <i>Incorporates cultural values, beliefs, and behaviors into the plan of care.</i></li> <li>• <i>Assists families in meeting their</i></li> </ul>	<p>4. sibling reactions</p> <p>C. Principles of family-centered care</p> <p><b>Health Promotion and Disease Prevention</b></p> <p>A. Discharge planning</p> <ul style="list-style-type: none"> <li>• Discharge planning process</li> <li>• Technologically dependent infants</li> <li>• Parent education       <ol style="list-style-type: none"> <li>1. infant cue recognition</li> <li>2. emergency measures</li> <li>3. medical equipment</li> <li>4. disease-specific instructions</li> <li>5. well-child care (normal growth and development, nutrition, dental health)</li> </ol> </li> <li>• Community resources</li> <li>• Home care and follow-up</li> </ul> <p>B. Primary care</p> <ul style="list-style-type: none"> <li>• Physical assessment</li> <li>• Immunization</li> <li>• Hearing screening</li> <li>• Eye exams</li> <li>• Neurologic follow-up</li> <li>• Developmental screening</li> <li>• Safety issues</li> </ul> <p><b>Healthcare Policy and Advocacy</b></p> <ul style="list-style-type: none"> <li>• Process of healthcare legislation</li> <li>• Maternal and child health legislation</li> <li>• Implications of healthcare policy</li> <li>• Economics of health care</li> <li>• Third-party reimbursement</li> <li>• Legislation and regulations concerning advanced practice</li> <li>• Advocacy</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication theory</li> </ul>
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		<p><i>spiritual needs.</i></p> <ul style="list-style-type: none"> <li>• <i>Incorporates families' spiritual beliefs into care.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Collaboration</li> <li>• Conflict resolution</li> <li>• Assertiveness</li> <li>• Collaborative practice models</li> <li>• Informatics</li> <li>• Consultation</li> </ul> <p><b>Ethical and Legal Issues</b></p> <ul style="list-style-type: none"> <li>• Ethical decision making</li> <li>• Ethical issues—reproductive, prenatal, neonatal, and infancy</li> <li>• Ethical use of information</li> <li>• Patient advocacy</li> <li>• Bioethics committees</li> <li>• Clinical research</li> <li>• Resource allocation</li> <li>• Genetic counseling</li> <li>• Legal issues affecting patient care and professional practice</li> <li>• Informed consent</li> <li>• Cultural sensitivity</li> </ul>
<p><b>Essential 8: Advanced Nursing Practice</b> The increased knowledge and sophistication of health care have resulted in the growth of specialization in nursing in order to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for carrying out these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain</p>	<p>The DNP program prepares the graduate to</p> <ol style="list-style-type: none"> <li>1. conduct a comprehensive and systematic assessment of health and illness parameters in complex situations, incorporating diverse and culturally sensitive approaches</li> <li>2. design, implement, and evaluate therapeutic interventions based on nursing science and other sciences</li> <li>3. develop and sustain therapeutic relationships and partnerships with patients (individual, family, or group) and other professionals to facilitate optimal care and patient outcomes</li> </ol>	<p><b>Domain 1: Management of Patient Health and Illness Status</b></p> <p><b>Competencies</b> <i>The neonatal nurse practitioner demonstrates competence in the management of patient health and illness status for newborns or infants and their families when she or he</i></p> <ul style="list-style-type: none"> <li>• <i>Applies current scientific knowledge to initiate change and improve care.</i></li> <li>• <i>Applies principles of epidemiology and demography in clinical practice.</i></li> <li>• <i>Obtains a health history, including pertinent maternal medical, antepartum, intrapartum, and</i></li> </ul>	<p>In addition to direct care, DNP graduates emphasizing care of individuals should be able to use their understanding of the practice context to document practice trends, identify potential systemic changes, and make improvements in the care of their particular patient populations in the systems within which they practice.</p> <p>The specialized competencies and the related curriculum content defined within this document by the specialty organization are required and are a major component of the DNP curriculum. NANNP developed the competency expectations that build upon and complement DNP Essentials 1–8. Coverage of the related curriculum content will ensure that graduates will be prepared with the essential content to be eligible for the national</p>

<p>of nursing. Indeed, this distinctive specialization is a hallmark of the DNP.</p> <p>Essential 8 specifies the foundational practice competencies that cut across specialties and are seen as requisite for DNP practice. All DNP graduates are expected to demonstrate refined assessment skills and base practice on the application of biophysical, psychosocial, behavioral, sociopolitical, cultural, economic, and nursing science as appropriate in their area of specialization.</p>	<ol style="list-style-type: none"> <li>4. demonstrate advanced levels of clinical judgment, systems thinking, and accountability in designing, delivering, and evaluating evidence-based care to improve patient outcomes</li> <li>5. guide, mentor, and support other nurses to achieve excellence in nursing practice</li> <li>6. educate and guide individuals and groups through complex health and situational transitions</li> <li>7. use conceptual and analytical skills in evaluating the links among practice, organizational, population, fiscal, and policy issues.</li> </ol>	<p><i>newborn history.</i></p> <ul style="list-style-type: none"> <li>• <i>Performs a complete systems-focused examination that includes physical, behavioral, and developmental assessments.</i></li> <li>• <i>Distinguishes between normal, variations of normal, and abnormal findings, including developmental, physiologic, and behavioral states.</i></li> <li>• <i>Employs screening and diagnostic strategies.</i></li> <li>• <i>Develops a comprehensive database that includes pertinent history, diagnostic tests, and physical assessment.</i></li> <li>• <i>Demonstrates critical thinking and diagnostic reasoning skills in clinical decision making.</i></li> <li>• <i>Develops a differential diagnosis based on assessment data.</i></li> <li>• <i>Formulates a diagnosis.</i></li> <li>• <i>Establishes priorities of care.</i></li> <li>• <i>Develops a plan of care based on scientific evidence and practice guidelines.</i></li> <li>• <i>Prescribes medications with legal authorization.</i></li> <li>• <i>Initiates therapeutic interventions according to established protocol and current standards of care.</i></li> <li>• <i>Intervenes according to established clinical guidelines to resuscitate and stabilize a compromised infant.</i></li> <li>• <i>Supports developmentally appropriate care</i></li> <li>• <i>Applies principles of pain management to care.</i></li> <li>• <i>Applies end-of-life and palliative care principles to care.</i></li> </ul>	<p>certification examination.</p>
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		<ul style="list-style-type: none"> <li>• <i>Evaluates outcomes of care.</i></li> <li>• <i>Documents assessment, plan, and outcomes of care.</i></li> <li>• <i>Incorporates community needs, strengths, and resources into practice.</i></li> <li>• <i>Communicates effectively, using professional terminology, format, and technology.</i></li> </ul>	
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### **Incorporation of Specialty-Focused Competencies into DNP Curricula**

DNP education is by definition specialized, and DNP graduates assume a variety of differing roles upon graduation. Consequently, a major component of DNP curricula focuses on providing the requisite specialty knowledge for graduates to enact particular roles in the larger healthcare system.

Although all graduates demonstrate the competencies delineated in DNP Essentials 1–8, specialty DNP preparation falls into two general categories: roles that specialize as an advanced practice nurse (APN) with a focus on care of individuals, and roles that specialize in practice at an aggregate, systems, or organizational level. This distinction is important because APNs face licensure, regulatory, credentialing, liability, and reimbursement issues different from the issues of those who practice at an aggregate, systems, or organizational level. As a result, the specialty content preparing DNP graduates for various practices will differ substantially.

The DNP graduate prepared for an APN role must demonstrate practice expertise, specialized knowledge, and expanded responsibility and accountability in the care and management of individuals and families. By virtue of this direct-care focus, APNs develop additional competencies in direct practice and in the guidance and coaching of individuals and families through developmental, health-illness, and situational transitions (Spross, 2005). The direct practice of APNs is characterized by the use of a holistic perspective; the formation of therapeutic partnerships to facilitate informed decision making, positive lifestyle change, and appropriate self-care; advanced practice thinking, judgment, and skillful performance; and use of diverse, evidence-based interventions in health and illness management (Brown, 2005).

APNs assess, manage, and evaluate patients at the most independent level of clinical nursing practice. They are expected to use advanced, highly refined assessment skills and employ a thorough understanding of pathophysiology and pharmacotherapeutics in making diagnostic and practice management decisions. **To ensure sufficient depth and focus, it is mandatory that a separate course be required for each of these three content areas: advanced health and physical assessment, advanced physiology and pathophysiology, and advanced pharmacology.**

### **Advanced Health and Physical Assessment**

Advanced health and physical assessment includes the comprehensive history, physical, and psychological assessment of signs and symptoms, pathophysiologic changes, and psychosocial variations of the patient (individual, family, or community). If the patient is an individual, the assessment should occur within the context of the family and community and should incorporate the cultural and developmental variations and needs of the patient. The purpose of this comprehensive assessment is to develop a thorough understanding of the patient in order to determine appropriate and effective health care, including health promotion strategies.

There is a core of general assessment content that every APN must have. Specifics and additional assessment related to various specialties (e.g., women's health, mental health, anesthesiology, pediatrics) should be further addressed and refined in that specialty's course content within each program. Health and physical assessment must also be used as a base and be reinforced in all clinical experiences and practicum courses. Individuals entering an advanced practice nursing program are expected to possess effective communication and patient teaching skills. Although these skills are basic to all professional nursing practice, preparation in the advanced practice nursing role must include continued refinement and strengthening of increasingly sophisticated communication and observational skills. Health and physical assessment content must rely heavily on the development of sensitive and skilled interviewing.

Course work should provide graduates with the knowledge and skills to

1. demonstrate sound critical thinking and clinical decision making
2. develop a comprehensive database, including complete functional assessment, health history, physical examination, and appropriate diagnostic testing
3. perform a risk assessment of the patient, including the assessment of lifestyle and other risk factors
4. identify signs and symptoms of common emotional illnesses
5. perform basic laboratory tests and interpret other laboratory and diagnostic data
6. relate assessment findings to underlying pathology or physiologic changes
7. establish a differential diagnosis based on the assessment data
8. develop an effective and appropriate plan of care for the patient that takes into consideration life circumstance and cultural, ethnic, and developmental variations.

### **Advanced Physiology and Pathophysiology**

The APN should possess a well-grounded understanding of normal physiologic and pathologic mechanisms of disease that serves as one primary component of the foundation for clinical assessment, decision making, and management.

The graduate should be able to relate this knowledge to “interpreting changes in normal function that result in symptoms indicative of illness” and assessing an individual's response to pharmacologic management of illnesses (NONPF, 1995, p. 152).

Every student in an advanced practice nursing program should be taught a basic physiology and pathophysiology course. Additional physiology and pathophysiology content relevant to the specialty area may be taught in the specialty courses. In addition to the core course, content should be integrated throughout all clinical and practicum courses and experiences.

The course work should provide the graduate with the knowledge and skills to

1. compare and contrast physiologic changes over the life span
2. analyze the relationship between normal physiology and pathological phenomena produced by altered states across the life span
3. synthesize and apply current research-based knowledge regarding pathological changes in selected disease states
4. describe the developmental physiology, normal etiology, pathogenesis, and clinical manifestations of commonly found or seen altered health states
5. analyze physiologic responses to illness and treatment modalities.

### **Advanced Pharmacology**

The APN should have a well-grounded understanding of basic pharmacologic principles, which includes those at the cellular response level. This area of core content should include both pharmacotherapeutics and pharmacokinetics of broad categories of pharmacologic agents. Although taught in a separate or dedicated course, pharmacology content should also be integrated into the content of advanced health and physical assessment and advanced physiology and pathophysiology courses. Additional application of this content should also be presented within the specialty course content and clinical experiences of the program in order to prepare the APN to practice within a specialty scope of practice.

As described above, the purpose of this content is to provide the graduate with the knowledge and skills to assess, diagnose, and manage (including the prescribing of pharmacologic agents) a patient's common health problems in a safe, high-quality, cost-effective manner.

The course work should provide graduates with the knowledge and skills to

1. comprehend the pharmacotherapeutics of broad categories of drugs
2. analyze the relationship between pharmacologic agents and physiologic and pathologic responses
3. understand the pharmacokinetics and pharmacodynamics of broad categories of drugs
4. understand the motivations of patients in seeking prescriptions and the willingness to adhere to prescribed regimens
5. safely and appropriately select pharmacologic agents for the management of patient health problems, with consideration for patient variations, the requirements to successfully manage the problem, and cost-effectiveness.