Nurse Practitioners in the NICU and PICU

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Nurse Practitioner and Advanced Practice Roles are emerging and being identified worldwide. A NP/APN is a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and or country in which s/he is credentialed to practice. A Masters degree is recommended for entry level – ICN 2002
Advanced Clinical Practice
Definition

- Graduate degree in Nursing.
- Conduct comprehensive health assessments
- Demonstrate a high level of autonomy
- Possess expert skills in the diagnosis and treatment of complex responses of individuals, families and communities
- Integrate education, research, management, leadership and consultation
- Collegial relationships with nursing, physicians and other health care professionals

ANA Congress of Nursing Practice - 1992
Characteristics of NP

- Educational Preparation
- Nature of Practice
- Regulatory Mechanisms
Educational Preparation

- Educational Preparation at the advanced level
  - advanced clinical competencies
  - Preparation for full extent of role
  - Facilitate lifelong learning & maintenance of competencies
- Formal recognition of educational programs preparing nurse practitioners/APN practice roles accredited or approved
- Formal system of licensure, registration, certification and credentialing
- Preferably at Master’s level
NP Education

- Not focused on 1 disease or body system
  - extensive knowledge pathophysiology, pharmacology
- Clinical management not currently undertaken by nurses
  - already have a background in professional nursing practice. Focus is in the medical model – including differential diagnosis, clinical decision making, medical therapeutics and pharmacology.
  - new skills, knowledge
- Collaborative, not independent, practice
  - trust
- Need for supervised clinical practice
Nature of Practice

- Integrates research, education, practice and management
- High degree of professional autonomy and independent/collaborative practice
- Caseload - focused on specific group of patients
- Advanced health assessment skills, decision-making skills and diagnostic reasoning skills
- Recognized advanced clinical competencies
- Perform and prescribe therapeutic measures
- Provision of consultation services
- Plans, implements and evaluates
Regulatory Mechanisms

- Right to diagnose
- Authority to prescribe medication
- Authority to prescribe treatment
- Authority to refer clients to other professionals
- Authority to admit patients to hospital
- Legislation to confer and protect the title “Nurse Practitioner/ Advanced Practice Nurse”
- Legislation or some other form of regulatory mechanism specific to advanced practice nurses
- Officially recognized titles for nurses working in advanced practice roles
APN Statistics

- International Council of Nurses – estimates nearly 40 countries have established or emerging advanced practice roles.
- Almost 140,000 APNs in the USA
- NPs in the U.S.A:
  - 115,000 in the year 2006
  - 3295 certified NNPs in 2003
  - Approximately 150 NPs practicing in Pediatric Critical Care
- New Zealand: 25 NP in 2006 (including NNP)
- Australia: introduced NP role in 2001
- UK: NP not a protected title- no uniform regulations for educational preparation or professional standards
- ICN *International Nurse Practitioner/Advanced Practice Network* - 68% of advanced practice nursing has research functions as part of their role
Nurse Practitioners in the World
North American Experience

Historically

• Nurse Practitioner
  ■ primary care, “medical model”

Recently

• NPs into acute, specialist areas
  ■ NNP, ACNP, PCCNP
Elements of Advanced Practice

- Clinical practice
- Education
- Leadership / Management
- Research
Role Expectations of NPs

- Five broad areas of care management
  - Coordination of care
  - Recording the history and performing the physical exam
  - Ordering diagnostic tests
  - Performing therapeutic procedures
  - Prescribing medications

Roles and Responsibilities

- Involved in physical and technical aspects of care
- Engaged in critical thinking and decision making
- Provide continuity of care
- Also involved in education, research and support of systems

Kleinpell, 1997; Richmond & Keane, 1996; DeNicola, 1993; Spisso, 1990; Bissinger, 1997; Schultz, 1993; Verger, 1997
Where did we come from?

Practice influences...Environment

- Increasing need for skills of an advanced practice nurse in specialties and in hospitals
  - Changing reimbursement policies
  - Shortening length of hospital stay
  - Number of patients rapidly moving through the health care system
  - Changes in medical training program regulations
  - Focus on well child care
- Pediatricians familiar with working with NPs
- Team approach in hospitals
Development of NP Role in NICU

- Acute care role of NNP developed in mid 1970’s
- Education incorporated-technical and diagnostic skills
- Manage population of infants in NICU- premature thru neonatal age group
- Impetus: Gap between expanding service needs, decreasing house staff availability
Evolution of NNP Role

- Original concept based on hospital’s needs at bedside- highly professional and skilled professionals necessary
- Over past 30 years- shift from certificate to graduate degree required
- Standardizations of educational programs
  - USA: National Association of Neonatal Nurses (NANN)
    - NCC (certifying body for NNPs)- graduate degree required 2000
- NNP shifted from strictly clinical role to:
  - Clinical
  - Research
  - Nursing and medical education
  - Administration

Role Responsibilities

- Direct provider of care for infants and neonates
- Teacher
- Researcher
- Advocate
- Consultant
- Manager of systems
- Leader

NANN, 2002  Elaboration of curriculum content for the professional role of the NNP.
Research on NNP Role

- NNPs perform at least comparably and in some cases better than physicians in training

- Role viewed favorably by nurses, physicians and parents
  - Trotter, 1994; Beal, 1997; Ruth-Sanchez, 1996
Responsibilities, roles & staffing patterns of nurse practitioners in the neonatal intensive care unit

- **Design:** prospective descriptive study in conjunction with regional multi-site outcomes study
- **Methods:** 22 NPs surveyed, 5 regional level II/III NICUs NE US
- **Results:**
  - NP roles included all levels of NICU care as well as antepartal consultation, delivery room management, transport, outpatient follow-up
  - NPs equally involved with all degrees of complexity and birthweights
  - Some NPs cared for smaller and sicker babies
- **Implications:** NP provide invaluable contribution with parent support and teaching, post- NICU follow-up care, professional research and education
- **NP role in NICU should not be viewed as a substitution for resident physicians**

The Nurse Practitioner Role in the NICU as perceived by Parents

- **Purpose:** understand and describe the nature of NP care delivery in the NICU as perceived by parents of critically ill neonates

- **Methods:** 8 parents; phenomenological method

- **Results:** NPs consistently perceived as:
  - effectively manage the medical care
  - “being positive and reassuring”
  - “being present”
  - “caring”
  - “translating information”
  - “making parents feel at ease”

Advantages of NNP Role

- Consistent care providers—particularly with extremely premature neonates
- Enhanced communication
- Improved discharge planning
- Role in follow-up care
- Reduction in overall cost of care
Development of NP Role in PICU

Practice influences.....APN roles

- PNP in primary care
  - Well child care in outpatient setting
- Masters prepared nurses in specialty practice (CNS)
  - Inpatient with direct and indirect care responsibilities for patients and families
- Neonatal nurse practitioners
  - Acute and critically ill neonates
- PNPs in-patient and out-patient
  - Responsibility for patients in pediatric specialty areas
Where did we come from?

- **Education**
  - Acute care (36%); CNS to postmasters acute/critical care
  - NP (27%); Primary care (37%)

- **Experience**
  - PNP in critical care
  - 3 yrs. (1-7 yrs);
  - Nursing 14.4 years (5-26 yrs)

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Nurse Practitioners in Pediatric Critical Care - Methods

- **Convenience Sample**
  - Distributed via internet, postal mailing and personal contact to 81 individuals
  - Part of larger study looking at APNs in Pediatrics

- **Multi-item survey (61 questions)**
  - Examining education & experience, practice environment, administrative issues, role responsibilities, clinical skills

Nurse Practitioners in Pediatric Critical Care - Results

- 74 respondents
- Master’s prepared
- 18 states represented
- 29 Hospitals
  - 35 Units

Nurse Practitioners in Pediatric Critical Care - Activities

Nurse Practitioner
in Pediatric Critical Care - Responsibilities

- Clinical Practice
  - History/Physical Exam - 100%
  - Order Medications - 100%
  - Order/interpret Lab Test - 100%
  - Interpret ECG - 100%
  - Order Blood Therapy - 97%
  - Adjust Mechanical Ventilation - 97%
  - Titrate Vasoactive Drugs - 91%

- Technical Skills
  - Peripheral IV - 98%
  - Feeding Tube Placement - 93%
  - Endotracheal Intub. - 84%
  - Arterial Lines - 83%
  - Chest Tube Removal - 81%
  - Central Lines - 80%

- Caring Practices
  - Administer Sedation - 93%

AACN Synergy Model
### Nurse Practitioner in Pediatric Critical Care - Responsibilities

#### Clinical Inquiry
- Participate Research - 60%

#### Facilitator of Knowledge
- Patient/Family Educ. - 100%
- Nursing Education - 90%
- Medical Education - 82%
Model for Advanced Practice:

- Direct Comprehensive Care
- Support of Systems
- Research
- Education
- Publication & Professional Leadership

Where are we now?

Practice models....

- Direct clinical management of a few patients or overall accountability and influence for a group of patients
- Protected time for continuing education, clinical research, integrate into the leadership of the unit
- Inpatient and outpatient responsibilities
- Coverage M-F days to 24/7
- Supervision
Practice models

- Work in a team, highly collaborative roles
- Authority rests with competence
- APNs distinct group by training and experience...interchangeable with other health care providers is not an effective model
  - Set of skills distinguish from MDs, PAs
- Dependent on individual’s education, certification, years of experience and characteristics of the practice setting
- 1-2 years to function independently
Nurse Practitioners in Intensive Care - Conclusions

- Growing segment of APNs
  - Represents increasing areas around the world
  - Practice settings varied
- Role components include Clinical Practice and other APN responsibilities
  - Including Education, Support of Systems, Research
  - Variability of % of time spent
Thank You

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