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THE ESSENTIALS
OF MASTER'S EDUCATION
FOR ADVANCED PRACTICE NURSING



American Association
of Colleges of Nursing

INTRODUCTION

In 1994, the Board of Directors of the American Association of Colleges of Nursing (AACN) established a task force to develop the essential elements of master's education for advance practice roles in nursing. The Board directed an inclusive process in which all parties interested in master's education in nursing would have the opportunity to participate in the initial stages of the defining process. To that end a series of regional meetings were convened to provide a national forum for the development of a consensus-based document defining the essential curricular elements of master's education in nursing for advanced practice as a clinical nurse specialist, nurse practitioner, nurse anesthetist, or nurse midwife.

This document is the result of an 18-month process in which a wide range of nursing educators, clinicians, executives, and researchers convened to discuss, debate, and direct the task force in its work. In addition to the many individuals who participated in the consensus-building process, a number of nursing organizations with an interest in advanced practice in nursing participated in the process. AACN sought this participation in order to ensure the development of a document that would be part of a coherent group of statements about master's education for nursing practice.

The original intent of this document was to focus predominantly on the education of nurses for advanced practice nursing in direct care roles. After deliberations among participating individuals, organizations, and task force members, a consensus formed that two discrete and related components of the Essentials should be developed—a statement of the essential core content for all master's educated nurses and a statement of the essential core content for all advanced practice nurses in direct care roles. These two elements are presented in this document.

MASTER'S EDUCATION: SOCIETAL ROLE

In 1993, Conrad, Haworth, and Miller released their comprehensive review of graduate education entitled *A Silent Success: Master's Education in the United States*. In this report, the researchers detailed their comprehensive national assessment of the diversity of graduate studies programs represented in American higher education, and they established a detailed typology of the range of master's studies available. The authors concluded that master's education is achieving notable goals, including the development of refined analytical skills, broad-based perspectives, enhanced abilities to articulate viewpoints and positions, clearer ability to connect theory to practice, and enhanced skills in a specific profession.

The researchers gave strong support to the important role that graduate education plays in developing a cadre of skilled professionals who make important contributions to the health, education, business, political, and social structure of the United States. Their validation of the importance of graduate education is echoed also by the Council of Graduate Schools (CGS), in its 1994 policy statement, *Master's Education: A Guide for Faculty and Administrators*. This statement outlines the historical growth of master's education in the U.S. and details the growing support of both employers and potential students for the value associated with post-baccalaureate education for professional practice in a variety of disciplines.

CGS recognizes two dominant program types for master's education—those programs that are practice-oriented with a goal that professionals develop advanced skills and knowledge for their professional roles, and those programs that are more theoretically or research directed with a goal of developing scholars for the generation of new knowledge. Conrad et al. (1993) expanded this

typology into four distinct groups, which blended some aspect of the two types of master's programs identified by CGS. These are: 1) community-centered programs in which students are actively engaged in the learning community and work in a collaborative way with teachers to integrate learning with the real-world experience of the discipline; 2) apprenticeship programs in which students are guided by master craftsmen in their education; 3) career advancement programs in which students develop advanced skills and knowledge to be seen as experts in their field through the use of case studies, practicum experiences, or internships; and 4) ancillary programs that provide little workplace experience, consisting predominantly of lectures that are the primary focus of faculty.

Conrad et al. (1993) reviewed programs in a variety of disciplines, including nursing. Using this typology, master's level *nursing* programs were categorized as being either the community-centered or ancillary classification. Many nurse educators were troubled by the description of master's level nursing programs as being ancillary in nature and having little or no connection to professional workplace experience.

MASTER'S EDUCATION IN NURSING: DIVERSITY AND RANGE

In 1990, AACN released the findings of its comprehensive review of graduate nursing education programs, *A Data Base for Graduate Education in Nursing: Summary Report*. These data were gathered from deans, graduate students, post-doctoral fellows, and new graduates in an attempt to describe the complex and diverse range of master's education in nursing, although a particular focus was placed on assessment of nursing administration and gerontology nursing master's programs. Master's level nursing programs were reported to have widely divergent clinical practicum requirements, didactic course-work experiences, and titling. In some instances, new graduates of nursing programs reported having no direct care experiences in their master's programs. These reports were received from graduates representing a variety of master's programs including adult health, child health, and community health.

Growing public acceptance and health care system interest in advanced practice nurses' ability to contribute to health care services delivery also created greater scrutiny of these clinicians, their utilization, their skill and knowledge base, and their educational experiences. Policy makers expressed concern about the diversity represented in both the advanced practice nursing education programs and titling. Safriet (1992) provided an exquisite analysis of the legal and regulatory guidelines shaping advanced practice and criticized the divergent titling used to describe advanced practice nurses. Indeed, numerous respondents to the AACN data base survey reported titles or specialty foci for their graduate studies that could not be validated with the graduate program administrators. Safriet (1992) strongly recommended clarifying titling along with standardizing educational requirements.

CGS notes that master's studies have both benefited from and struggled with the diversity of program types, degree requirements, and program or degree proliferation. The master's education in nursing experience is clearly reflective of the experience of all master's education as nursing programs have been developed to meet public health and student needs. The greater concerns for consumer confidence, quality graduate education, and clear outcomes mandates that a more coherent and consistent set of curricular standards be articulated. Moreover, titling must be simplified and specifically relevant to the core clinical competencies that an advanced practice nurse brings to the health care delivery process.

The four dominant titles for advanced practice in a direct care provider role are nurse practitioner, nurse anesthetist, nurse-midwife, and clinical nurse specialist. Master's level nursing education is the appropriate level of education for nursing professionals who are seeking roles that

require advanced practice skills in order to function as providers and organizers of the health care delivery process. Currently, much discussion is occurring about the organization of nursing roles for advanced practice. In some instances, the clinical nurse specialist role is being merged with the nurse practitioner role. One example of this role merger is in the preparation of an advanced practice clinician for practice in acute care settings. This evolution may expand but is not currently a predominant form of practice. Therefore, the four roles are described in this document as having equal relevance to advanced practice. The continued evolution of these roles must be monitored to ensure that future changes are reflected in curriculum standards or recommendations.

A nurse prepared at the master's level also is clearly able to serve important functions as an expert clinician as a faculty member in a nursing education program. **However, the primary focus of the master's education program should be the clinical role.** Such elements as the case management process and educational theories and methods are important tools used by advanced practice clinicians, but they must be applied by clinicians who have an expert base of advanced practice clinical skills and knowledge. Further, the doctoral degree should be considered the appropriate and desired credential for a career as a nurse educator.

SUMMARY OF PROCESS

To these ends, this document provides recommendations for nurse educators seeking to design, implement, and evaluate master's level nursing programs and for graduate students seeking to accurately assess a program.

The following standards were developed over an 18-month process through a series of consensus-building working meetings in which nurse educators, clinicians, administrators, and researchers, representing a range of nursing programs, specialties, nursing organizations, and advanced practice roles discussed, debated, and made recommendations regarding these *Essentials*. Over 500 individuals, representing 44 states and the District of Columbia participated in the consensus-building process. In addition, 217 institutions and 21 nursing organizations were represented in the consensus-building process (see Appendix B). The strong participation and important contributions made by representatives of other nursing organizations were deliberately sought by the task force in order to ensure the development of a document that was congruent with, and would expand and inform, statements regarding the education of nurses for advanced practice developed by other organizations. AACN's strong interest in consensus development and mutual collaboration provided a framework for development of this seminal document.

MASTER'S NURSING EDUCATION

Curriculum Model

Through the consensus-building process used by the AACN Task Force, general agreement on the outline of a master's nursing curriculum evolved. The matrix presented in Figure 1 shows the components of master's education and their relationship to the specific advanced practice roles. Briefly, the master's curriculum is conceptualized as having three components. These are:

1. Graduate Nursing Core: foundational curriculum content deemed essential for all students who pursue a master's degree in nursing regardless of specialty or functional focus.
2. Advanced Practice Nursing Core: essential content to provide direct patient/client services at an advanced level.
3. Specialty Curriculum Content: those clinical and didactic learning experiences identified and defined by the specialty nursing organizations.

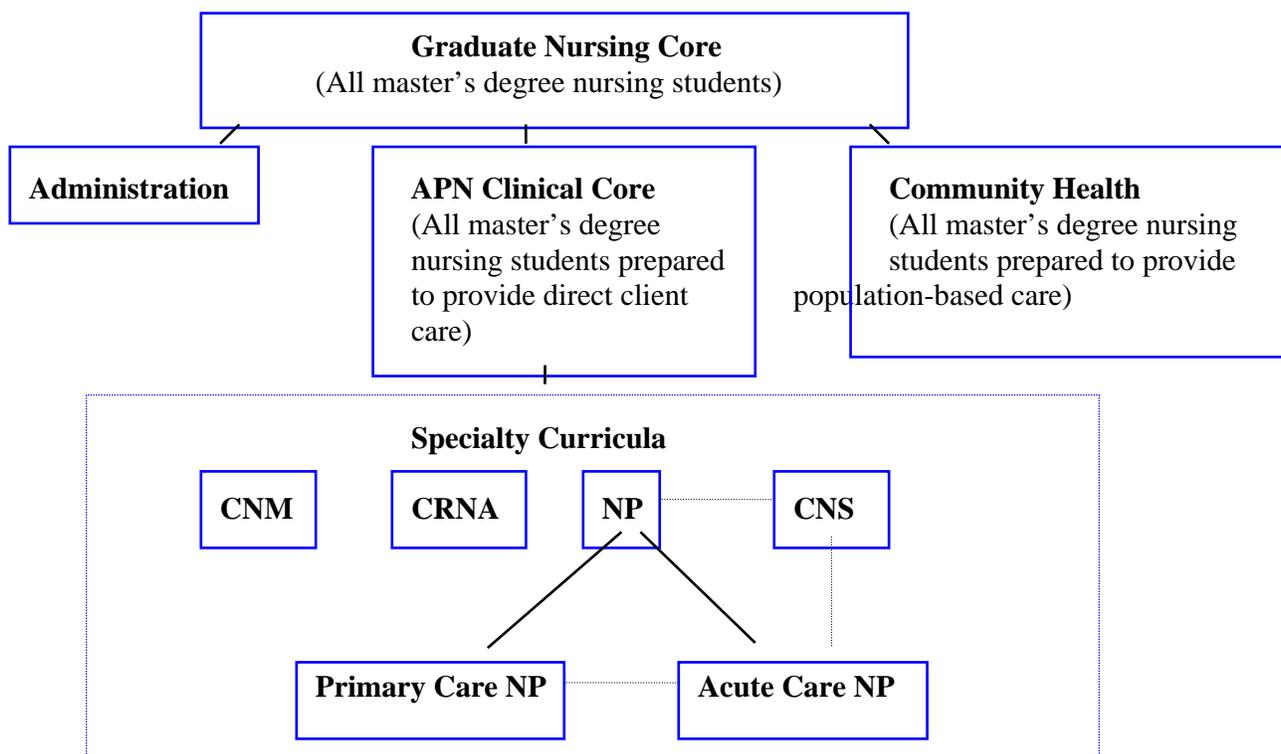
This document addresses both the graduate core and advanced practice nursing core of master's nursing education. The essential components of these two areas of the master's nursing curriculum are defined. The specialized content defined by the other specialty organizations builds on and complements the two areas of core content defined by this document. The two areas of core content, the graduate and advanced practice nursing core, along with the specialty curriculum content defined by the specialty nursing organizations, comprise the master's nursing curriculum for direct care roles.

Master's level programs in nursing administration and community health are included in the Model of Master's Nursing Curriculum. Students prepared in master's nursing programs in these two specialty areas are, in most cases, not prepared to provide direct client care; therefore, these two specialty areas of nursing education are not included under the APN Clinical Core. If a program, however, does prepare graduates in these specialty areas to provide direct client care the students in the program should receive the content included in the advanced practice nursing clinical core.

Faculty in the Master's Education Nursing Program

Faculty in all master's nursing education programs should have a strong theoretical and practice base in the field in which they teach. Interdisciplinary education, which includes two or more disciplines from health or other fields of study collaborating through joint planning, decision-making, and goal-setting, is supported and encouraged for all master's nursing education programs. Collaboration in interdisciplinary education emanates from an understanding and appreciation of the roles and contributions that each discipline brings to the care delivery experience. Master's level nursing students, if possible, should be educated in an environment that provides such interdisciplinary educational experiences based on mutual understanding and respect and designed to enhance the practice of each discipline. This is in contrast to multidisciplinary education, which occurs when several disciplines work in parallel, often with independent goals (AACN Position Statement on Interdisciplinary Education and Practice, March 1995).

Figure 1: Model of Master’s Nursing Curriculum¹



Outline of Essential Curriculum Elements

Each of these curricular elements is fully delineated in the following sections.

Graduate Core Curriculum Content

- I. Research
- II. Policy, Organization, and Financing of Health Care
 - A. Health Care Policy
 - B. Organization of the Health Care Delivery System
 - C. Health Care Financing
- III. Ethics
- IV. Professional Role Development
- V. Theoretical Foundations of Nursing Practice
- VI. Human Diversity and Social Issues
- VII. Health Promotion and Disease Prevention

Advanced Practice Nursing Core Curriculum

- I. Advanced Health/Physical Assessment
- II. Advanced Physiology and Pathophysiology
- III. Advanced Pharmacology

GRADUATE CORE CURRICULUM CONTENT

¹ A dotted line depicts an evolving relationship between these entities.

The purpose of the Graduate Core Curriculum is to define the content that forms the foundation of all graduate nursing education irrespective of specialty. The core competencies that each master's nursing student is expected to achieve are listed under each content area. It is anticipated that each institution will customize the curriculum to reflect the unique mission and needs of the school, geographic area, and student population. Each of the content areas defined need not be a separate course except where noted.

Each graduate of a master's nursing education program must possess strong critical thinking and decision making skills. The ability to critically and accurately assess, plan, intervene, and evaluate the health and illness experiences of clients (individuals, families, and communities) should be a primary goal of master's nursing education. Skills of this level are mandatory in order to improve health care delivery and outcomes of patient care. The ability to communicate effectively, both orally and in writing, is also essential to transmit the outcomes of these processes. During the program, every student should acquire the ability to analyze, synthesize, and utilize knowledge. This may be accomplished through a variety of experiences including formal courses, seminars, clinical experiences, and independent study.

A master's degree program may be the first formal educational opportunity for a student to integrate prior and current learning. To facilitate integration of learning the inclusion of a culminating or capstone experience in all master's programs is strongly recommended.

The faculty in each program must determine the most appropriate capstone experience for their graduate students to complete. Whether this capstone experience is a series of specific courses and seminars, one course which requires compilation and interpretation of information from previous courses and experience, a performance, a comprehensive examination, or a research project and thesis, the capstone experience requires a student to put into practice what has been learned in the program. (Council of Graduate Schools, 1994, p. 37)

I. Research

The purpose of research at the master's level is to prepare a practitioner for the utilization of new knowledge to provide high quality health care, initiate change, and improve nursing practice. The goal of the research component of the curriculum should be to prepare a clinician who is proficient at the utilization of research including the evaluation of research, problem identification within the clinical practice setting, awareness of practice outcomes, and the clinical application of research. Research findings should serve as the basis for clinical and organization decision making. Separate or distinct course work in this area is deemed essential in addition to the integration of this content into other didactic and clinical course work.

In order to accomplish that end, course work should provide graduates with the knowledge and skills to:

1. access current and relevant data needed to answer questions identified in one's nursing practice;
2. utilize new knowledge to analyze the outcomes of nursing interventions, to initiate change, and to improve practice;
3. use computer hardware and appropriate software, and to understand statistics and research methods;

4. utilize information systems for the storage and retrieval of data, consistent with the particular population focus;
5. initiate a line of inquiry into comprehensive databases in order to utilize available research in the practice of nursing; and
6. write and communicate effectively—identify a clinical problem, demonstrate an understanding of the research related to this problem, critically analyze the problem and current knowledge, and develop a strategy for the incorporation of the research into the treatment regimen.

In a professional master's program a research thesis is not an appropriate requirement. Depending on the individual philosophy and mission of the institution, a thesis is an appropriate *option* particularly if the student is preparing to enter a doctoral degree program. The use of the thesis as an option for master's education is consistent with the Council on Graduate Education's position (see statement on the inclusion of a capstone experience in General Discussion of Core Content). A master's thesis or research project does not have to be independent or original research, but should be the new application of ideas. According to the Council of Graduate Schools (1994). "Working on a thesis or project gives the student experience in doing research, and also teaches how to analyze the research of others....The master's student must also demonstrate the ability to write about and communicate orally the work done" (p. 37).

II. Policy, Organization, and Financing of Health Care

In an environment with ongoing changes in the organization and financing of health care, it is imperative that all graduates of master's degree nursing programs have a keen understanding of health care policy, organization, and financing of health care. The purpose of this content is to prepare a graduate to provide quality cost-effective care, to participate in the design and implementation of care in a variety of health care systems, and to assume a leadership role in the managing of human, fiscal, and physical health care resources.

The graduate's understanding of policy, organization, and financing of health care should include the recognition of primary health care as defined by the World Health Organization (1978), which addresses issues of poverty and public health. Recognizing the relationship of these issues to improving health care delivery and outcomes of patient care is essential.

A. Health Care Policy

Graduates "should be responsive to increasing levels of public, governmental, and third party participation in and scrutiny of the shape and direction of the health care system" (Shugars, O'Neil, Bader, 1991, p. 19). The purpose of this content area is to develop a comprehensive knowledge of how health policy is formulated, how to affect this process, and how it impacts clinical practice and health care delivery.

Course work should provide graduates with the knowledge and skills to:

1. analyze the results of policy research relevant to health care delivery;
2. differentiate and delineate legislative and regulatory processes;
3. articulate the interaction between regulatory controls and quality control within the health care delivery system;
4. evaluate local, state and national socioeconomic and health policy issues and trends;

5. articulate health care issues/concerns to elected and appointed officials, both public and private, and to health care consumers;
6. serve on boards or task forces that influence health policy;
7. interpret health care research for consumers and officials;
8. serve as a consumer advocate on health issues; and
9. articulate and interpret the significance of the advanced practice nursing roles to policy-makers, health care providers, and consumers.

B. Organization of the Health Care Delivery System

The inclusion of this content serves to develop an understanding of the ways health care is organized and delivered in order for the graduate to function effectively and assume a leadership role in the health care system. An understanding of the totality of health care systems, including managed care and integrated systems of delivery, must be obtained. As an increasing emphasis is placed on the delivery of care within integrated care systems or on the continuum of health care, all nursing graduates, even those with a more acute or specialized focus, must have a clear understanding of community and the organization of community-based systems of care; therefore, concepts of community, community assessment, and community health care systems are essential components of the master's nursing curriculum. Likewise, those nurses practicing in community-based systems of care must have an understanding of the acute care delivery system, its organization, and its functioning.

Course work should provide graduates with the knowledge and skills to:

1. understand how various health care delivery systems are organized, including community and population-based systems;
2. deliver health care services in a variety of delivery systems, including acute and ambulatory care delivery systems, and managed and integrated care systems; and
3. provide leadership in the health care delivery system.

C. Health Care Financing

The purpose of this content is to develop an understanding of and familiarity with health care financing as an essential foundation for the delivery of health care services. A complete background or comprehension of health care economics and accounting is not deemed essential; therefore, the graduate must know why and when to seek additional expertise in the area of financing and economics when practicing in, managing, or establishing a health care delivery system or practice.

Course work should provide graduates with the knowledge and skills to:

1. comprehend the economic implications of health planning, the organization of personnel and resources, the design of payment systems, and the outcome analysis of health care delivery or cost-effectiveness of services;
2. use basic principles of fiscal management and budgeting, and health economics;
3. analyze and monitor the cost-effectiveness of clinical decisions and make recommendations for increasing the cost-effectiveness of care;
4. make high quality, cost-effective choices in the use of health care resources;
5. demonstrate fiscal accountability for one's own practice while providing quality care; and
6. develop a budget and manage resources, including knowing when to seek the services of external resources such as a lawyer or practice consultant.

III. Ethics

Expanding health technologies and increasing demands for cost containment have emphasized the need for ethical decision making by all health care professionals. One of the core competencies, identified by the Pew Health Professions Commission (Shugars et al., 1991), is the ability for all health professions' graduates to "provide counseling for patients in situations where ethical issues arise, as well as participate in discussions of ethical issues in health care as they affect communities, society and the health professions" (p. 19). Ethical decision making should be the focus of content as evidenced in research, evaluation, clinical practice, and management.

Master's nursing education should develop an understanding of the principles, personal values, and beliefs that provide a framework for nursing practice. The graduate educational experience should provide students the opportunity to explore their values and analyze how these values shape their professional practice and influence their decisions, and to analyze systems of health care and determine how the values underpinning them influence the interventions and care delivered.

Course work should provide graduates with the knowledge and skills to:

1. identify and analyze common ethical dilemmas and the ways in which these dilemmas impact on patient care;
2. evaluate ethical methods of decision making and engage in an ethical decision making process;
3. evaluate ethical decision making from both a personal and organizational perspective and develop an understanding of how these two perspectives may create conflicts of interest;
4. identify areas in which a personal conflict of interest may arise; propose resolutions or actions to resolve the conflict;
5. understand the purpose of an ethics committee's role in health care delivery systems; serve on an ethics committee; and
6. assume accountability for the quality of one's own practice.

IV. Professional Role Development

This content operationalizes the theoretical principles and norms within the graduate's specialty area of practice. This content, therefore, cannot be presented only as theoretical or formal classroom content but must be integrated into the student's clinical practice as well. The transition into the new role of advanced practice nurse must occur throughout the entire master's program. The content in professional role development should provide the student with a clear understanding of the nursing profession, advanced practice nursing roles, the requirements for, and regulation of these roles. The purpose of this content is to facilitate transition into the advanced practice nursing role and to integrate the new functions and activities of the advanced nursing role into the graduate's professional practice. Part of this transition is the ability to deal with role ambiguity and to view role boundaries as fluid. The need for the graduate to work effectively in interdisciplinary relationships or partnerships, recognizing the uniqueness and similarities among the various roles, is also critical.

The graduate should also demonstrate certain personal qualities and professional behaviors such as assertiveness, the responsibility to engage in professional activities, and advocacy for change. The profession of nursing relies on the master's-prepared nurse to participate in the profession and exert leadership not only within the profession but also in the health care system. Therefore, it is the

responsibility of each master's nursing program to foster professional role development necessary for providing leadership in the delivery of health care.

Course work should provide graduates with the knowledge and skills to:

1. communicate with other health care professionals; develop and work in collaborative and interdependent relationships;
2. assume the role of advocate for consumers and change agent within the health care system;
3. actualize/implement the advanced practice roles of teacher, researcher, advocate, clinician, consultant, collaborator, and manager of systems;
4. negotiate one's roles within the practice system;
5. effect change within the health care system, not merely react to changes brought on by others—monitor changes that are occurring within the health care system, through both internal and external forces, and make appropriate changes in order to improve the system, the delivery of health care, and health care outcomes;
6. articulate the differentiated advanced practice nurse roles, such as the current roles of the nurse practitioner, clinical nurse specialist, nurse anesthetist, or certified nurse-midwife, to other health professionals, policy makers, and consumers; and
7. advocate for the nursing profession and actively recruit potential students into the profession.

V. Theoretical Foundations of Nursing Practice

The graduate should be prepared to critique, evaluate, and utilize appropriate theory within one's practice. Nursing practice integrates and applies a wide range of theories from nursing and other sciences. Moreover, nursing graduates provide clinical care that focuses on the whole of a person's health and illness experiences. A practice that incorporates a range of theories allows the nursing clinician to develop a comprehensive and holistic approach to care.

The master's nursing curriculum should include nursing and other relevant theories from a wide range of fields such as the natural, social, organizational, and biological sciences. This content together with knowledge of current research provides a firm foundation to guide the graduate's advanced nursing practice.

Course work should provide graduates with the knowledge and skills to:

1. critique and evaluate a variety of theories from nursing and related fields;
2. apply and utilize appropriate theories from nursing and related fields to provide high quality health care to clients; and
3. understand the health care delivery system in which they practice through the application of appropriate theories.

VI. Human Diversity and Social Issues

Over the next 15 years the population in the U.S. will be characterized by a rapidly increasing number of elderly adults....Growing racial and ethnic diversity will (also) profoundly affect health care in the U.S..... Health professionals in general and health professional educators in particular will need to understand and relate to the special needs of (these) growing segments of society. (Shugars et al., 1991, p. 6)

Global awareness is necessary to provide culturally sensitive care. The inclusion of this content develops an understanding and appreciation of human diversity in health and illness and to assure the delivery of appropriate or individualized health care. Diverse learning experiences must be provided throughout the curriculum and clinical practice to develop an understanding of the wide diversity of subcultural influences on human behavior, including ethnic, racial, gender, and age differences. Individual or specific course content must be identified and provided in this area to ensure that appropriate and sensitive health care is provided.

Course work should provide graduates with the knowledge and skills to:

1. perform a community assessment, utilizing appropriate epidemiological principles;
2. differentiate and compare the wide range of cultural norms and health care practices of groups of varied racial and ethnic backgrounds;
3. define, design, and implement culturally competent health care;
4. ensure that systems meet the needs of the population(s) served and are culturally relevant;
5. recognize the variants in health, including physiological variations, in a wide range of cultural, racial, ethnic, age, and gender groups that may influence the assessment and plan of care; and
6. practice in collaboration with a multicultural work force.

Numerous health care problems occur due to social issues and lifestyle choices. Therefore, the graduate of a master's nursing program should be able to recognize and appropriately address in the comprehensive health care plan defined for the client current societal and individual health problems such as societal and domestic violence, family abuse, sexual abuse, and substance abuse.

VII. Health Promotion and Disease Prevention

Health Promotion and Disease Prevention can be defined comprehensively as a wide array of personal/clinical and community-based interventions in addition to broad development and application of social policies that influence the goal of achieving health. Officials estimate that the scope of preventable loss of life is nearly one million Americans annually (Department of Health and Human Services, 1995). Nursing has a long history of concern for primary health care with a strong emphasis on promotion of health, prevention of illness and identification of environmental factors that impact health status. Key concepts for nursing include healthy lifestyle, self-care, holism, risk reduction, and maximizing quality of life.

Graduate education should prepare nurses with a strong theoretical foundation in health promotion, illness prevention, and maintenance of function across the health-illness continuum with clients: the individual, family, or community. Health promotion and disease prevention must also be an integral part of graduate nursing practice. Expansion of this foundation and clinical practice should be continued through the advanced practice nursing (APN) core and specialty courses.

Course work should provide graduates with the knowledge and skills to:

1. use epidemiological, social, and environmental data to draw inferences regarding the health status of client populations, i.e., individuals, families, groups, and communities;
2. develop and monitor comprehensive, holistic plans of care that address the health promotion and disease prevention needs of client populations;
3. incorporate theories and research in generating teaching and counseling strategies to promote and preserve health and healthy lifestyles in client populations;

4. foster a multidisciplinary approach to discuss strategies and garner multifaceted resources to empower client populations in attaining and maintaining maximal functional wellness;
5. influence regulatory, legislative, and public policy in private and public arenas to promote and preserve healthy communities.

ADVANCED PRACTICE NURSING CORE CURRICULUM

Advanced practice nurse (APN) is recognized as an overarching term for licensed registered nurses (RNs) who are prepared at the graduate level in nursing as a nurse practitioner, clinical nurse specialist, certified nurse-midwife, or nurse anesthetist. It is recognized that these roles or titles may change over time or new roles may evolve. However, the Advanced Practice Nursing Core Curriculum, defined in this document, applies to *any* nurse prepared at the master's degree level *to provide direct client care*.

Courses described as part of the advanced practice nursing core are taught at the graduate level. The APN curriculum assumes an undergraduate base in nursing, physiology, pharmacology, and health assessment upon which these graduate courses build. The purpose or outcome of the advanced practice nursing core curriculum is to prepare a graduate to assume responsibility and accountability for the health promotion, assessment, diagnosis, and management of client problems including the prescription of pharmacologic agents within a specialty area of clinical practice. A strong emphasis must be placed on developing sound clinical decision making skills including diagnostic reasoning throughout the entire advanced practice curriculum.

The content in the advanced practice nursing core must build upon the content included in each of the three areas listed as APN core. The content must also be integrated throughout all of the specialty and clinical courses. However, in order to ensure sufficient depth and focus, separate core courses should be developed for each of the three content areas defined as advanced practice nursing core: advanced health/physical assessment, advanced physiology/pathology, and advanced pharmacology.

I. Advanced Health/Physical Assessment

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

There is a core of general assessment content that every advanced practice nurse must have. Specifics and additional assessment related to various specialties, such as women's health, mental health, anesthesiology, or pediatrics, should be further addressed and refined in that specialty's course content within each program. Health/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 client teaching skills. Although these 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/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 data base, including complete functional assessment, health history, physical examination, and appropriate diagnostic testing;
3. perform a risk assessment of the client 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; and
8. develop an effective and appropriate plan of care for the client which takes into consideration life circumstance and cultural, ethnic, and developmental variations.

II. Advanced Physiology and Pathophysiology

The advanced practice nurse 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" (NONPF, 1995, p. 152), and in assessing an individual's response to pharmacologic management of illnesses.

Every student in an advanced practice nursing program should be taught a system-focused physiology and basic 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/seen altered health states; and
5. analyze physiologic responses to illness and treatment modalities.

III. Advanced Pharmacology

Every APN graduate should have a well-grounded understanding of basic pharmacologic principles, which includes 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 other content areas identified as the Advanced Practice Nursing Core: Advanced Health/Physical Assessment and Advanced Physiology/Pathology. 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 prescription of pharmacologic agents) a client'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/pathologic responses;
3. understand the pharmacokinetics and pharmacodynamics of broad categories of drugs;
4. understand the motivations of clients in seeking prescriptions and the willingness to adhere to prescribed regimens;
5. safely and appropriately select pharmacologic agents for the management of client health problems based on client variations, the problem being managed, and cost effectiveness;
6. provide comprehensive and appropriate client education in relation to prescribed pharmacologic agents;
7. analyze the effects of single and multiple drug regimens on the client's health and functioning;
8. understand the variety of state legal requirements for advanced practice nursing prescriptive authority; and
9. fulfill legal requirements for writing prescriptions as an advanced practice nurse in the appropriate state.

CLINICAL EXPERIENCES

The content of the advanced practice nursing curriculum outlined in this document defines the essential elements of any advanced practice nursing program. This curriculum provides the basis for the preparation of a clinician in any of the advanced practice nursing roles. The advanced practice nurse in today's health care system is expected to practice independently and interdependently to provide a broad range of health care services, including health promotion, assessment, diagnosis, and management of client potential and actual health care problems in a variety of settings. When preparing a graduate who will provide direct client care, make diagnoses, prescribe, and assume the accountability for clinical care, the educational program should provide the student with the opportunity to master knowledge of health care problems, and apply these knowledge and skills in extensive clinical practice. Clinical experience is defined as "direct client care to individuals, families, and or communities" (NONPF, 1995, p. 77).

Advanced practice nursing specialty organizations and accrediting bodies, such as the American College of Nurse-Midwives (ACNM) and the American Association of Nurse Anesthetists (AANA), have defined the number and types of clinical experiences required of graduates of the education programs. For specific numbers and types of experiences required for nurse-midwifery and nurse anesthesia students see ACNM's *Criteria for Accreditation of Basic Certificate, Basic Graduate, and Pre-Certification Nurse-Midwifery Education Programs with Guidelines for Elaboration and Documentation of Accreditation Criteria* (1993) and AANA's Council on Accreditation of Nurse Anesthesia Education Programs' *Standards for Accreditation of Nurse Anesthesia Educational Programs* (1994). The National Organization of Nurse Practitioner Faculties (NONPF) has published *Curriculum Guidelines and Program Standards for Nurse Practitioner Education* (1995), which states that "500 clinical hours is the minimum number required for nurse practitioner education" (p. 77). The guidelines further state that a minimum of 500 clinical hours may not be adequate for specialties that provide care to multiple age groups (e.g., family nurse practitioner) or prepare nurse practitioners to function in multiple care settings (e.g., in both primary and tertiary care settings). These specialties may require more clinical hours. When defining the number of clinical hours, both the complexity of the specialty content as well as the need for adequate clinical exposure to ensure retention and the development of needed skills must be considered. The quality and type of experience must also be weighed (p. 78).

The advanced practice nursing student prepared in any of the current direct care provider roles must receive sufficient clinical experience to provide depth and breadth in a given specialty or with designated population(s). AACN endorses the minimum requirements defined by the specialty organizations for the individual APN roles. No organization has developed similar standards that define the minimum number of clinical hours required for CNS education programs. AACN believes that all APN students who will practice in a direct client care role, make diagnoses, prescribe therapeutic regimens, and be accountable for these decisions, should have a minimum of 500 hours in direct clinical practice during the education program.

SUMMARY

The curriculum content outlined in this document defines only the *essential* elements of a Graduate Nursing Core for all master's nursing education programs and the Advanced Practice Nursing Core for all master's nursing programs preparing advanced practice nurses in any direct client care role. Educators, it is expected, will individualize the programs to reflect their own schools' unique missions and the needs of their geographic regions and student populations. Additional content and clinical experiences relevant to the various specialty roles should also be provided. Additional required content and clinical experiences for the preparation of specialized advanced practice nursing roles are defined by the various specialty organizations and supported by AACN.

As the health care system evolves, the roles that advanced practice nurses fill also will evolve. The titles of these roles may also change over time. Advanced practice nurses must be prepared to meet the changing needs of the health care system in providing quality, cost-effective care to diverse populations in a wide variety of settings. The essential elements of curriculum content in this document provide a sound basis for the educational preparation and practice of nurses prepared at the master's level in all specialty and practice roles in a rapidly evolving health care system.

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Suggested Reading

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APPENDIX A

As the AACN Task Force began designing the process that would be used to define the essentials of master's nursing education, a model of expert practice was sought that could serve as a framework for the final essentials document and for the consensus-building process itself. One of the only models that has been researched, evaluated and applied worldwide is Patricia Benner's (1984) study of the expert practice of nurses. This landmark study was one of the first to identify the expert practice of nurses from observations and interviews. Benner's work was later validated, adapted and

expanded by Fenton (1985) for the clinical nurse specialist and by Brykczynski (1989) for the nurse practitioner. The CNS and NP domains and competencies were derived from interpretive research and observations of clinical nurse specialists and nurse practitioners in actual clinical situations and interviews. Significant evidence exists that common competencies for CNSs and NPs are found in many domains although each role emphasizes some domains more than others (Fenton & Brykczynski, 1993).

In 1990, the National Organization of Nurse Practitioner Faculties (NONPF) sought to further clarify the nurse practitioner competencies by developing the *Advanced Nurse Practice: Nurse Practitioner Curriculum Guidelines*. To do so, they incorporated the domains and competencies identified by Brykczynski with the results of research by Hanson (1986) and Monninger (1987). These guidelines have been further refined; and new competencies from the 1994 NONPF document, *Primary Care Nurse Practitioner Graduate Outcomes*, have been added to produce the *1995 NONPF Curriculum Guidelines and Program Standards for Nurse Practitioner Education*. The CNS and NONPF domains and competencies have been used in various capacities by nurse educators: as the model for an entire curriculum, the structure for a course, the outline for a role class, or a framework for curriculum evaluation. The reader is referred to the *1995 NONPF Curriculum Guidelines and Program Standards for Nurse Practitioner Education*, for an excellent description of how the domains and competencies have been developed, expanded, and validated over the past five years.

For these reasons Benner's domains and competencies as modified by Fenton, Brykczynski, and NONPF for advanced nursing practice were presented at each of the regional working meetings. The domains were presented as the starting point for small group discussions to identify the essential elements of the master's nursing curriculum. Although there was variance as to how much time was spent reviewing the domains at each of the regional meetings and by individual work groups, general consensus was reached that the domains and competencies were applicable to all advanced practice nursing roles.

All advanced practice roles were represented by participants at each meeting. In most cases, the domains were believed to be general enough to serve as curriculum guidelines for the clinical component of advanced practice nursing master's programs. The domain, Management of Client Health/Illness Status, is the only domain highly specific to the role of nurse practitioners in primary care settings.

The domains for advanced nursing practice, as defined by NONPF (1995), are reproduced here as an example of a framework that was used throughout the consensus-building process to define the essential elements of the master's nursing curriculum. The domains also serve as an example of a framework upon which the clinical component of any advanced practice nursing program could be designed.

APPENDIX B

Master's Education for the Future: Defining the Essential Elements
States That Participated in the Regional Meetings (N=44)

Alabama
Arizona
California
Colorado
Connecticut
Delaware
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana

Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
South Carolina
South Dakota
Tennessee
Texas
Utah
Virginia
Washington
West Virginia
Wisconsin

The District of Columbia and
Iceland were also represented.

Master's Education for the Future: Defining the Essential Elements
Institutions That Participated in the Regional Meetings (N=217)

Albany State College
Albany, Georgia

Alcorn State University
Natchez, Mississippi

American International College
Springfield, Massachusetts

Angelo State University
San Angelo, Texas

Arizona State University
Tempe, Arizona

Armstrong State College
Savannah, Georgia

Aurora University
Aurora, Illinois

Azusa Pacific University
Azusa, California

Ball State University
Muncie, Indiana

Bellarmino College
Louisville, Kentucky

Belmont University
Nashville, Tennessee

Beth El College of Nursing
Colorado Springs, Colorado

Bethel College of Kansas
North Newton, Kansas

Beth Israel Hospital
Boston, Massachusetts

Binghamton University
Binghamton, New York

Biola University
La Mirada, California

Boston College
Chestnut Hill, Massachusetts

Brenau University
Gainesville, Georgia

Brigham Young University
Provo, Utah

C.R. Drew University
Los Angeles, California

California State University, Bakersfield
Bakersfield, California

California State University, Chico
Chico, California

California State University,
Dominguez Hills
Carson, California

California State University, Fresno
Fresno, California

California State University, Long Beach
Long Beach, California

California State University, Los Angeles
Los Angeles, California

California State University, Sacramento
Sacramento, California

California State University,
San Francisco
San Francisco, California
Capital University
Columbus, Ohio

Carlow College

Pittsburgh, Pennsylvania

Case Western Reserve University
Cleveland, Ohio

Catholic University of America
Washington, District of Columbia

Cedar Crest College
Allentown, Pennsylvania

Clemson University
Clemson, South Carolina

College of Mount St. Joseph
Cincinnati, Ohio

College of New Rochelle
New Rochelle, New York

College of Our Lady of the Elms
Chicopee, Massachusetts

College of St. Catherine
St. Paul, Minnesota

Columbia College of Nursing
Milwaukee, Wisconsin

Columbia University Teachers College
New York, New York

Dartmouth Hitchcock Medical Center
Lebanon, New Hampshire

Delta State University
Cleveland, Mississippi

Drake University
Des Moines, Iowa

Duke University
Durham, North Carolina

Duquesne University
Pittsburgh, Pennsylvania

East Carolina University
Greenville, North Carolina

East Tennessee State University
Johnson City, Tennessee

Eastern Michigan University
Ypsilanti, Michigan

Education Program Associates
Campbell, California

Emory University
Atlanta, Georgia

Felician College
Lodi, New Jersey

Fort Hays State University
Hays, Kansas

Franklin University
Columbus, Ohio

Gannon University
Erie, Pennsylvania

George Mason University
Fairfax, Virginia

Georgetown University
Washington, District of Columbia

Georgia Southern University
Statesboro, Georgia

Georgia State University
Atlanta, Georgia

Gonzaga University
Spokane, Washington

Graceland College
Independence, Missouri

Grady Health System
Atlanta, Georgia

Grand View College
Des Moines, Iowa

Hahnemann University
Philadelphia, Pennsylvania

Hampton University
Hampton, Virginia

Harbor-UCLA
Torrance, California

Holy Names College
Oakland, California

Howard University
Washington, District of Columbia

Hunter College, City University of New York
New York, New York

Idaho State University
Pocatello, Idaho

Indiana State University
Terre Haute, Indiana

Indiana University
Indianapolis, Indiana

Intercollegiate Center for
Nursing Education
Spokane, Washington

Jewish Hospital College of Nursing
and Allied Health
St. Louis, Missouri
Kansas Newman College
Wichita, Kansas

Kent State University
Kent, Ohio

LaSalle University
Philadelphia, Pennsylvania

Linfield College

Portland, Oregon

MGH Institute of Health Professions
Boston, Massachusetts

Madonna University
Livonia, Michigan

Marquette University
Milwaukee, Wisconsin

Massachusetts College of Pharmacy
and Allied Health Sciences
Boston, Massachusetts

McNeese State University
Lake Charles, Louisiana

Medical College of Ohio
Toledo, Ohio

Medical University of South Carolina
Charleston, South Carolina

Metropolitan State University
St. Paul, Minnesota

Midwestern State University
Wichita Falls, Texas

Millersville University
Millersville, Pennsylvania

Mississippi University for Women
Columbus, Mississippi

Molloy College
Rockville Centre, New York

Montana State University
Bozeman, Montana

National University
San Diego, California

New Mexico State University
Las Cruces, New Mexico

Niagara University
Niagara University, New York

North Park College
Chicago, Illinois

Northeastern University
Boston, Massachusetts

Northern Illinois University
DeKalb, Illinois

Northern Michigan University
Marquette, Michigan

Oakland University
Rochester, Michigan

Ohio University
Athens, Ohio

Otterbein College
Westerville, Ohio

Pace University
Pleasantville, New York

Penn State
University Park, Pennsylvania

Purdue University
West Lafayette, Indiana

Regents College
Albany, New York

Regis College
Weston, Massachusetts

Research College of Nursing
Kansas City, Missouri

Rivier College
Nashua, New Hampshire

Rush Alzheimer's Disease Center
Chicago, Illinois

Rush University
Chicago, Illinois

Saint Francis College
Fort Wayne, Indiana

Saint Joseph College
West Hartford, Connecticut

Saint Joseph's College
N. Windham, Maine

Saint Louis University
St. Louis, Missouri

Saint Xavier University
Chicago, Illinois

Salem State College
North Andover, Massachusetts

Samford University
Birmingham, Alabama

Samuel Merritt College
Oakland, California

San Diego State University
San Diego, California

San Jose State University
San Jose, California

Scottish Rite Children's Medical Center
Atlanta, Georgia

Seton Hall
South Orange, New Jersey

South Dakota State University
Brookings, South Dakota

Southern Illinois University
at Edwardsville
Edwardsville, Illinois

Spalding University
Louisville, Kentucky

SUNY/Buffalo
Buffalo, New York

SUNY/New Paltz
New Paltz, New York

SUNY Health Science Center/Syracuse
Syracuse, New York

Syracuse University
Syracuse, New York

Tennessee State University
Nashville, Tennessee

Texas Woman's University
Dallas, Texas

The Arthur James Cancer Hospital
and Research Institute
Columbus, Ohio

The College of Saint Elizabeth
Morristown, New Jersey

The Medical College of Georgia
Augusta, Georgia
The Ohio State University
Columbus, Ohio

The Ohio State University Hospital
Columbus, Ohio

The University of Akron
Akron, Ohio

Trenton State College
Trenton, New Jersey

Troy State University
Montgomery, Alabama

U.S. Army Medical Department
Center and School
San Antonio, Texas

Uniformed Services University
of the Health Sciences
Rockville, Maryland

University of Alabama at Birmingham
Birmingham, Alabama

University of Alabama in Huntsville
Huntsville, Alabama

University of Arizona
Tucson, Arizona

University of California, Davis
Sacramento, California

University of California, Los Angeles
Los Angeles, California

University of California, San Francisco
San Francisco, California

University of Central Florida
Orlando, Florida

University of Cincinnati
Cincinnati, Ohio
University of Connecticut
Storrs, Connecticut

University of Hartford
West Hartford, Connecticut

University of Hawaii
Honolulu, Hawaii

University of Iceland
Reykjavik, Iceland

University of Illinois at Chicago
Chicago, Illinois

University of Indianapolis
Indianapolis, Indiana

University of Iowa
Iowa City, Iowa

University of Kansas Medical Center
Kansas City, Kansas

University of Kentucky
Lexington, Kentucky

University of Louisville
Louisville, Kentucky

University of Maine
Orono, Maine

University of Mary
Bismarck, North Dakota

University of Mary Hardin-Baylor
Belton, Texas

University of Maryland
Baltimore, Maryland

University of Massachusetts-Boston
Dorchester, Massachusetts

University of Massachusetts-Dartmouth
N. Dartmouth, Massachusetts

University of Massachusetts-Lowell
Lowell, Massachusetts

University of Massachusetts-Worcester
Worcester, Massachusetts

University of Medicine and Dentistry
of New Jersey
Newark, New Jersey

University of Minnesota
Minneapolis, Minnesota

University of Mississippi
Jackson, Mississippi

University of Missouri-Columbia
Columbia, Missouri

University of Missouri-Kansas City
Kansas City, Missouri

University of Nevada-Reno
Reno, Nevada

University of New Hampshire
Durham, New Hampshire

University of New Mexico
Albuquerque, New Mexico

University of North Carolina at Charlotte
Charlotte, North Carolina

University of North Carolina, Greensboro
Greensboro, North Carolina

University of North Carolina
at Wilmington
Wilmington, North Carolina

University of North Dakota
Grand Forks, North Dakota
University of Oklahoma
Oklahoma City, Oklahoma

University of Phoenix
Phoenix, Arizona

University of Phoenix, Hawaii Campus
Honolulu, Hawaii

University of Pittsburgh
Pittsburgh, Pennsylvania

University of Portland
Portland, Oregon

University of Rochester
Rochester, New York

University of San Diego
San Diego, California

University of San Francisco
San Francisco, California

University of Scranton
Scranton, Pennsylvania

University of South Alabama
Mobile, Alabama

University of South Carolina
Columbia, South Carolina

University of South Florida
Tampa, Florida

University of Southern California
Los Angeles, California

University of Southern Maine
Portland, Maine

University of Southwestern Louisiana
Lafayette, Louisiana

University of Texas at El Paso
El Paso, Texas

University of Texas-Pan American
Edinburg, Texas

University of Utah
Salt Lake City, Utah

University of Virginia
Charlottesville, Virginia

University of Wisconsin Oshkosh
Oshkosh, Wisconsin

Western Michigan University
Kalamazoo, Michigan

Wheeling Jesuit College
Wheeling, West Virginia

Wichita State University
Wichita, Kansas

Widener University
Chester, Pennsylvania

University of Wisconsin-Milwaukee
Kenosha, Wisconsin

Ursuline College
Pepper Pike, Ohio

Valparaiso University
Valparaiso, Indiana

Vanderbilt University
Nashville, Tennessee

Virginia Commonwealth University
Richmond, Virginia

Wagner College
Chatham Township, New Jersey

Wayne State University
Detroit, Michigan

Webster University
St. Louis, Missouri

Wesley College
Dover, Delaware

West Virginia University
Morgantown, West Virginia

Western Carolina University
Cullowhee, North Carolina

Winona State University
Rochester, Minnesota

Wright State University
Dayton, Ohio

Xavier University
Cincinnati, Ohio

Yale University
New Haven, Connecticut

Youngstown State University
Youngstown, Ohio

Master's Education for the Future: Defining the Essential Elements
Organizations That Participated in the Regional Meetings (N=21)³

American Academy of Nurse Practitioners
Austin, Texas

American Association of Nurse Anesthetists
Park Ridge, Illinois

American Association of Critical-Care Nurses
Aliso Viejo, California

American College of
Nurse-Midwives
Washington, District of Columbia

³ These organizations were *officially* represented at one or more of the regional meetings. Many other organizations had members or representatives that participated in the meetings. Inclusion on this list is not intended to imply endorsement of this published document.

American Nurses Association
Washington, District of Columbia

Board of Registered Nursing-California
Sacramento, California

CRT Associates
Nashville, Tennessee

Council on Accreditation
Park Ridge, Illinois

Department of Veteran Affairs
Washington, District of Columbia

Division of Nursing
U.S. Department of Health and Human
Services
Rockville, Maryland

Massachusetts Board of Nursing
Boston, Massachusetts

Massachusetts Board of
Registration in Nursing
Boston, Massachusetts

Missouri State Board of Nursing
Jefferson City, Missouri

National Association of School Nurses, Inc.
Scarborough, Maine

National Certification Board of PNP/N
Rockville, Maryland

New York State Nurses Association
Syracuse, New York

Ohio Board of Nursing
Columbus, Ohio

Ohio League for Nursing
Cleveland, Ohio

Ohio Nurses Association
Columbus, Ohio

Southern Council on Collegiate Education for
Nursing
Atlanta, Georgia

Washington State Nursing Care Quality
Assurance Commission
Olympia, Washington