American Association
of Colleges of Nursing

The Essentials of Master's Education in Nursing

American Association of Colleges of Nursing

The Essentials of Master's Education in Nursing
March 21, 2011

TABLE OF CONTENTS

The Essentials of Master's Education in Nursing
March 21, 2011

The *Essentials of Master's Education in Nursing* reflect the profession's continuing call for imagination, transformative thinking, and evolutionary change in graduate education. The extraordinary explosion of knowledge, expanding technologies, increasing diversity, and global health challenges produce a dynamic environment for nursing and amplify nursing's critical contributions to health care. Master's education prepares nurses for flexible leadership and critical action within complex, changing systems, including health, educational, and organizational systems. Master's education equips nurses with valuable knowledge and skills to lead change, promote health, and elevate care in various roles and settings. Synergy with these *Essentials,* current and future healthcare reform legislation, and the action-oriented recommendations of the Initiative on the Future of Nursing (IOM, 2010) highlights the value and transforming potential of the nursing profession.

These *Essentials* are core for all master's programs in nursing and provide the necessary curricular elements and framework, regardless of focus, major, or intended practice setting. These *Essentials* delineate the outcomes expected of all graduates of master's nursing programs. These *Essentials* are not prescriptive directives on the design of programs. Consistent with the *Baccalaureate* and *Doctorate of Nursing Practice Essentials*, this document does not address preparation for specific roles, which may change and emerge over time. These *Essentials* also provide guidance for master's programs during a time when preparation for specialty advanced nursing practice is transitioning to the doctoral level.

Master's education remains a critical component of the nursing education trajectory to prepare nurses who can address the gaps resulting from growing healthcare needs. Nurses who obtain the competencies outlined in these *Essentials* have significant value for current and emerging roles in healthcare delivery and design through advanced nursing knowledge and higher level leadership skills for improving health outcomes. For some nurses, master's education equips them with a fulfilling lifetime expression of their mastery area. For others, this core is a graduate foundation for doctoral education. Each preparation is valued.

Introduction

The dynamic nature of the healthcare delivery system underscores the need for the nursing profession to look to the future and anticipate the healthcare needs for which nurses must be prepared to address. The complexities of health and nursing care today make expanded nursing knowledge a necessity in contemporary care settings. The transformation of health care and nursing practice requires a new conceptualization of master's education. Master's education must prepare the graduate to:

- Lead change to improve quality outcomes,

- Advance a culture of excellence through lifelong learning,
- Build and lead collaborative interprofessional care teams,
- Navigate and integrate care services across the healthcare system,
- Design innovative nursing practices, and
- Translate evidence into practice.

Graduates of master's degree programs in nursing are prepared with broad knowledge and practice expertise that builds and expands on baccalaureate or entry-level nursing practice. This preparation provides graduates with a fuller understanding of the discipline of nursing in order to engage in higher level practice and leadership in a variety of settings and commit to lifelong learning. For those nurses seeking a terminal degree, the highest level of preparation within the discipline, the new conceptualization for master's education will allow for seamless movement into a research or practice-focused doctoral program (AACN, 2006, 2010).

The nine Essentials addressed in this document delineate the knowledge and skills that *all* nurses prepared in master's nursing programs acquire. These Essentials guide the preparation of graduates for diverse areas of practice in any healthcare setting.

- **Essential I: Background for Practice from Sciences and Humanities**
  - Recognizes that the master's-prepared nurse integrates scientific findings from nursing, biopsychosocial fields, genetics, public health, quality improvement, and organizational sciences for the continual improvement of nursing care across diverse settings.
- **Essential II: Organizational and Systems Leadership**
  - Recognizes that organizational and systems leadership are critical to the promotion of high quality and safe patient care. Leadership skills are needed that emphasize ethical and critical decision making, effective working relationships, and a systems-perspective.
- **Essential III: Quality Improvement and Safety**
  - Recognizes that a master's-prepared nurse must be articulate in the methods, tools, performance measures, and standards related to quality, as well as prepared to apply quality principles within an organization.
- **Essential IV: Translating and Integrating Scholarship into Practice**
  - Recognizes that the master's-prepared nurse applies research outcomes within the practice setting, resolves practice problems, works as a change agent, and disseminates results.
- **Essential V: Informatics and Healthcare Technologies**

    - Recognizes that the master's-prepared nurse uses patient-care technologies to deliver and enhance care and uses communication technologies to integrate and coordinate care.
- **Essential VI: Health Policy and Advocacy**
    - Recognizes that the master's-prepared nurse is able to intervene at the system level through the policy development process and to employ advocacy strategies to influence health and health care.
- **Essential VII: Interprofessional Collaboration for Improving Patient and Population Health Outcomes**
    - Recognizes that the master's-prepared nurse, as a member and leader of interprofessional teams, communicates, collaborates, and consults with other health professionals to manage and coordinate care.
- **Essential VIII: Clinical Prevention and Population Health for Improving Health**
    - Recognizes that the master's-prepared nurse applies and integrates broad, organizational, client-centered, and culturally appropriate concepts in the planning, delivery, management, and evaluation of evidence-based clinical prevention and population care and services to individuals, families, and aggregates/identified populations.
- **Essential IX: Master's-Level Nursing Practice**
    - Recognizes that nursing practice, at the master's level, is broadly defined as any form of nursing intervention that influences healthcare outcomes for individuals, populations, or systems. Master's-level nursing graduates must have an advanced level of understanding of nursing and relevant sciences as well as the ability to integrate this knowledge into practice. . Nursing practice interventions include both direct and indirect care components.

Master's Education in Nursing and Areas of Practice

Graduates with a master's degree in nursing are prepared for a variety of roles and areas of practice. Graduates may pursue new and innovative roles that result from health reform and changes in an evolving and global healthcare system. Some graduates will pursue direct care practice roles in a variety of settings (e.g., the Clinical Nurse Leader, nurse educator). Others may choose indirect care roles or areas of practice that focus on aggregate, systems, or have an organizational focus, (e.g. nursing or health program management, informatics, public health, or clinical research coordinator). In addition to developing competence in the nine Essential core areas delineated in this document, each graduate will have additional coursework in an area of practice or functional role. This coursework may include more in-depth preparation and competence in one or two of the Essentials or in an additional/ supplementary area of practice.

For example, more concentrated coursework or further development of the knowledge and skills embedded in Essential IV (Translational Scholarship for Evidence-Based Practice) will prepare the nurse to manage research projects for nurse scientists and other

healthcare researchers working in multi-professional research teams. More in-depth preparation in Essential II (Organizational and System Leadership) will provide knowledge useful for nursing management roles.

In some instances, graduates of master's in nursing programs will seek to fill roles as educators. As outlined in Essential IX, all master's-prepared nurses will develop competence in applying teaching/learning principles in work with patients and/or students across the continuum of care in a variety of settings. However, as recommended in the Carnegie Foundation report (2009), *Educating Nurses: A Call for Radical Transformation,* those individuals, as do all master's graduates, who choose a nurse educator role require preparation across all nine Essential areas, including graduate-level clinical practice content and experiences. In addition, a program preparing individuals for a nurse educator role should include preparation in curriculum design and development, teaching methodologies, educational needs assessment, and learner-centered theories and methods. Master's prepared nurses may teach patients and their families and/or student nurses, staff nurses, and variety of direct-care providers. The master's prepared nurse educator differs from the BSN nurse in depth of his/her understanding of the nursing discipline, nursing practice, and the added pedagogical skills. To teach students, patients, and caregivers regarding health promotion, disease prevention, or disease management, the master's-prepared nurse educator builds on baccalaureate knowledge with *graduate-level content in the areas of health assessment, physiology/pathophysiology, and pharmacology* to strengthen his/her scientific background and facilitate his/her understanding of nursing and health-related information. Those master's students who aspire to faculty roles in baccalaureate and higher degree programs will be advised that additional education at the doctoral level is needed (AACN, 2008).

Context for Nursing Practice

Health care in the United States and globally is changing dramatically. Interest in evolving health care has prompted greater focus on health promotion and illness prevention, along with cost-effective approaches to high acuity, chronic disease management, care coordination, and long-term care. Public concerns about cost of health care, fiscal sustainability, healthcare quality, and development of sustainable solutions to healthcare problems are driving reform efforts. Attention to affordability and accessibility of health care, maintaining healthy environments, and promoting personal and community responsibility for health is growing among the public and policy makers.

In addition to broad public mandates for a reformed and responsive healthcare system, a number of groups are calling for changes in the ways all health professionals are educated to meet current and projected needs for contemporary care delivery. The Institute of

Medicine (IOM), an interprofessional healthcare panel, described a set of core competencies that all health professionals regardless of discipline will demonstrate: 1) the provision of patient-centered care, 2) working in interprofessional teams, 3) employing evidence-based practice, 4) applying quality improvement approaches, and 5) utilizing informatics (IOM, 2003).

Given the ongoing public trust in nursing (Gallup, 2010), and the desire for fundamental reorganization of relationships among individuals, the public, healthcare organizations and healthcare professionals, graduate education for nurses is needed that is wide in scope and breadth, emphasizes all systems-level care and includes mastery of practice knowledge and skills. Such preparation reflects mastery of higher level thinking and conceptualization skills than at the baccalaureate level, as well as an understanding of the interrelationships among practice, ethical, and legal issues; financial concerns and comparative effectiveness; and interprofessional teamwork.

Master's Nursing Education Curriculum

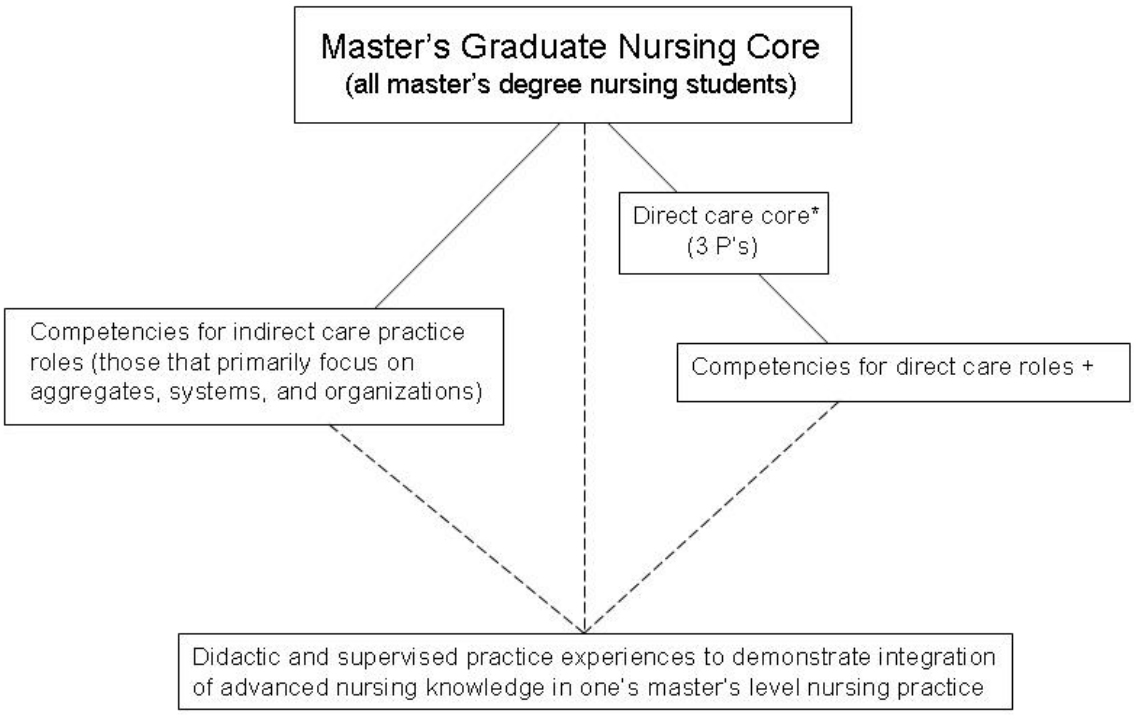
The master's nursing curriculum is conceptualized in Figure 1 and includes three components:

1. Graduate Nursing Core: foundational curriculum content deemed essential for all students who pursue a master's degree in nursing regardless of the functional focus.
2. Direct Care Core: essential content to provide direct patient services at an advanced level.
3. Functional Area Content: those clinical and didactic learning experiences identified and defined by the professional nursing organizations and certification bodies for specific nursing roles or functions.

This document delineates the graduate nursing core competencies for all master's graduates. These core outcomes reflect the many changes in the healthcare system occurring over the past decade. In addition, these expected outcomes for all master's degree graduates reflect the increasing responsibility of nursing in addressing many of the gaps in health care as well as growing patient and population needs.

Master's nursing education, as is all nursing education, is evolving to meet these needs and to prepare nurses to assume increasing accountabilities, responsibilities, and leadership positions. As master's nursing education is re-envisioned and preparation of individuals for advanced specialty nursing practice transitions to the practice doctorate these *Essentials* delineate the foundational, core expectations for these master's program graduates until the transition is completed.

Figure 1: Model of Master's Nursing Curriculum



* *All* master's degree programs that prepare graduates for roles that have a component of direct care practice are required to have graduate level content/coursework in the following three areas: physiology/pathophysiology, health assessment, and pharmacology. However, graduates being prepared for any one of the four APRN roles (CRNA, CNM, CNS, or CNP), must complete three separate comprehensive, graduate level courses that meet the criteria delineated in the 2008 *Consensus Model for APRN Licensure, Accreditation, Certification and Education*. (http://www.aacn.nche.edu/education/pdf/APRNReport.pdf). In addition, the expected outcomes for each of these three APRN core courses are delineated in *The Essentials of Doctoral Education for Advanced Nursing Practice* (pg. 23-24) (http://www.aacn.nche.edu/DNP/pdf/Essentials.pdf).

+ The nursing educator is a direct care role and therefore requires graduate-level content in the three Direct Care Core courses. *All graduates of a master's nursing program must have supervised practice experiences that are sufficient to demonstrate mastery of the Essentials.* The term "supervised" is used broadly and can include precepted experiences with faculty site visits. These learning experiences may be accomplished through diverse teaching methods, including face-to-face or simulated methods.

In addition, development of clinical proficiency is facilitated through the use of focused and sustained clinical experiences designed to strengthen patient care delivery skills, as

well as system assessment and intervention skills, which will lead to an enhanced understanding of organizational dynamics. These immersion experiences afford the student an opportunity to focus on a population of interest or may focus on a specific role. Most often, the immersion experience occurs toward the end of the program as a culminating synthesis experience.

The *Essentials of Master's Education in Nursing*

Essential I: Background for Practice from Sciences and Humanities

Rationale

Master's-prepared nurses build on the competencies gained in a baccalaureate nursing program by developing a deeper understanding of nursing and the related sciences needed to fully analyze, design, implement, and evaluate nursing care. These nurses are well prepared to provide care to diverse populations and cohorts of patients in clinical and community-based systems. The master's-prepared nurse integrates findings from the sciences and the humanities, biopsychosocial fields, genetics, public health, quality improvement, health economics, translational science, and organizational sciences for the continual improvement of nursing care at the unit, clinic, home, or program level. Master's-prepared nursing care reflects a more sophisticated understanding of assessment, problem identification, design of interventions, and evaluation of aggregate outcomes than baccalaureate-prepared nursing care.

Students being prepared for direct care roles will have graduate-level content that builds upon an undergraduate foundation in health assessment, pharmacology, and pathophysiology. Having master's-prepared graduates with a strong background in these three areas is seen as imperative from the practice perspective. It is recommended that the master's curriculum preparing individuals for direct care roles include three separate graduate-level courses in these three content areas. In addition, the inclusion of these three separate courses facilitates the transition of these master's program graduates into the DNP advanced-practice registered-nurse programs.

Master's-prepared nurses understand the intersection between systems science and organizational science in order to serve as integrators within and across systems of care. Care coordination is based on systems science (Nelson et al., 2008). Care management incorporates an understanding of the clinical and community context, and the research relevant to the needs of the population. Nurses at this level use advanced clinical reasoning for ambiguous and uncertain clinical presentations, and incorporate concerns of family, significant others, and communities into the design and delivery of care. Master's-prepared nurses use a variety of theories and frameworks, including nursing and ethical theories in the analysis of clinical problems, illness prevention, and health promotion strategies. Knowledge from information sciences, health communication, and health literacy are used to provide care to multiple populations. These nurses are able to

address complex cultural issues and design care that responds to the needs of multiple populations, who may have potentially conflicting cultural needs and preferences. As healthcare technology becomes more sophisticated and its use more widespread, master's-prepared nurse are able to evaluate when its use is appropriate for diagnostic, educational, and therapeutic interventions. Master's-prepared nurses use improvement science and quality processes to evaluate outcomes of the aggregate of patients, community members, or communities under their care, monitor trends in clinical data, and understand the implications of trends for changing nursing care.

The master's-degree program prepares the graduate to:

1. Integrate nursing and related sciences into the delivery of advanced nursing care to diverse populations.

2. Incorporate current and emerging genetic/genomic evidence in providing advanced nursing care to individuals, families, and communities while accounting for patient values and clinical judgment.

3. Design nursing care for a clinical or community-focused population based on biopsychosocial, public health, nursing, and organizational sciences.

4. Apply ethical analysis and clinical reasoning to assess, intervene, and evaluate advanced nursing care delivery.

5. Synthesize evidence for practice to determine appropriate application of interventions across diverse populations.

6. Use quality processes and improvement science to evaluate care and ensure patient safety for individuals and communities.

7. Integrate organizational science and informatics to make changes in the care environment to improve health outcomes.

8. Analyze nursing history to expand thinking and provide a sense of professional heritage and identity.

Sample Content

- Healthcare economics and finance models
- Advanced nursing science, including the major streams of nursing scientific development
- Scientific bases of illness prevention, health promotion, and wellness
- Genetics, genomics, and pharmacogenomics
- Public health science, such as basic epidemiology, surveillance, environmental science, and population health analysis and program planning
- Organizational sciences

- Systems science and integration, including microsystems, mesosystems, and macro-level systems
- Chaos theory and complexity science
- Leadership science
- Theories of bioethics
- Information science
- Quality processes and improvement science
- Technology assessment
- Nursing Theories

Essential II: Organizational and Systems Leadership

Rationale

Organizational and systems leadership are critical to the promotion of high quality and safe patient care. Leadership skills are needed that emphasize ethical and critical decision making. The master's-prepared nurse's knowledge and skills in these areas are consistent with nursing and healthcare goals to eliminate health disparities and to promote excellence in practice. Master's-level practice includes not only direct care but also a focus on the systems that provide care and serve the needs of a panel of patients, a defined population, or community.

To be effective, graduates must be able to demonstrate leadership by initiating and maintaining effective working relationships using mutually respectful communication and collaboration within interprofessional teams, demonstrating skills in care coordination, delegation, and initiating conflict resolution strategies. The master's-prepared nurse provides and coordinates comprehensive care for patients–individuals, families, groups, and communities–in multiple and varied settings. Using information from numerous sources, these nurses navigate the patient through the healthcare system and assume accountability for quality outcomes. Skills essential to leadership include communication, collaboration, negotiation, delegation, and coordination.

Master's-prepared nurses are members and leaders of healthcare teams that deliver a variety of services. These graduates bring a unique blend of knowledge, judgment, skills, and caring to the team. As a leader and partner with other health professionals, these nurses seek collaboration and consultation with other providers as necessary in the design, coordination, and evaluation of patient care outcomes.

In an environment with ongoing changes in the organization and financing of health care, it is imperative that all master's-prepared nurses have a keen understanding of healthcare policy, organization, and financing. The purpose of this content is to prepare a graduate to provide quality cost-effective care; to participate in the implementation of care; and to

assume a leadership role in the management of human, fiscal, and physical healthcare resources. Program graduates understand the economies of care, business principles, and how to work within and affect change in systems.

The master's-prepared nurse must be able to analyze the impact of systems on patient outcomes, including analyzing error rates. These nurses will be prepared with knowledge and expertise in assessing organizations, identifying systems' issues, and facilitating organization-wide changes in practice delivery. Master's-prepared nurses must be able to use effective interdisciplinary communication skills to work across departments identifying opportunities and designing and testing systems and programs to improve care. In addition, nurse practice at this level requires an understanding of complexity theory and systems thinking, as well as the business and financial acumen needed for the analysis of practice quality and costs.

The master's-degree program prepares the graduate to:

1. Apply leadership skills and decision making in the provision of culturally responsive, high-quality nursing care, healthcare team coordination, and the oversight and accountability for care delivery and outcomes.

2. Assume a leadership role in effectively implementing patient safety and quality improvement initiatives within the context of the interprofessional team using effective communication (scholarly writing, speaking, and group interaction) skills.

3. Develop an understanding of how healthcare delivery systems are organized and financed (and how this affects patient care) and identify the economic, legal, and political factors that influence health care.

4. Demonstrate the ability to use complexity science and systems theory in the design, delivery, and evaluation of health care.

5. Apply business and economic principles and practices, including budgeting, cost/benefit analysis, and marketing, to develop a business plan.

6. Design and implement systems change strategies that improve the care environment.

7. Participate in the design and implementation of new models of care delivery and coordination.

Sample Content

• Leadership, including theory, leadership styles, contemporary approaches, and strategies (organizing, managing, delegating, supervising, collaborating, coordinating)
• Data-driven decision-making based on an ethical framework to promote culturally responsive, quality patient care in a variety of settings, including creative and imaginative strategies in problem solving
• Communication–both interpersonal and organizational–including elements and channels, models, and barriers
• Conflict, including conflict resolution, mediation, negotiation, and managing conflict
• Change theory and social change theories
• Systems theory and complexity science
• Healthcare systems and organizational relationships (e.g., finance, organizational structure, and delivery of care, including mission/vision/philosophy and values)
• Healthcare finance, including budgeting, cost/benefit analysis, variance analysis, and marketing
• Operations research (e.g., queuing theory, supply chain management, and systems designs in health care)
• Teams and teamwork, including team leadership, building effective teams, and nurturing teams

Essential III: Quality Improvement and Safety

Rationale

Continuous quality improvement involves every level of the healthcare organization. A master's-prepared nurse must be articulate in the methods, tools, performance measures, culture of safety principles, and standards related to quality, as well as prepared to apply quality principles within an organization to be an effective leader and change agent.

The Institute of Medicine report (1998) *To Err is Human* defined patient safety as "freedom from accidental injury" and stated that patients should not be at greater risk for accidental injury in a hospital or healthcare setting than they are in their own home. Improvement in patient safety along with reducing and ultimately eliminating harm to patients is fundamental to quality care. Skills are needed that assist in identifying actual or potential failures in processes and systems that lead to breakdowns and errors and then redesigning processes to make patients safe.

Knowledge and skills in human factors and basic safety design principles that affect unsafe practices are essential. Graduates of master's-level programs must be able to analyze systems and work to create a just culture of safety in which personnel feel comfortable disclosing errors—including their own—while maintaining professional

accountability. Learning how to evaluate, calculate, and improve the overall reliability of processes are core skills needed by master's-prepared nurses.

Knowledge of both the potential and the actual impact of national patient safety resources, initiatives, and regulations and the use of national benchmarks are required. Changes in healthcare reimbursement with the introduction of Medicare's list of "never events" and the regulatory push for more transparency on quality outcomes require graduates to be able to determine if the outcomes of standards of practice, performance, and competence have been met and maintained.

The master's-prepared nurse provides leadership across the care continuum in diverse settings using knowledge regarding high reliability organizations. These organizations achieve consistently safe and effective performance records despite unpredictable operating environments or intrinsically hazardous endeavors (Weick, 2001). The master's-prepared nurse will be able to monitor, analyze, and prioritize outcomes that need to be improved. Using quality improvement and high reliability organizational principles, these nurses will be able to quantify the impact of plans of action.

The master's-degree program prepares the graduate to:

1. Analyze information about quality initiatives recognizing the contributions of individuals and inter-professional healthcare teams to improve health outcomes across the continuum of care.

2. Implement evidence-based plans based on trend analysis and quantify the impact on quality and safety.

3. Analyze information and design systems to sustain improvements and promote transparency using high reliability and just culture principles.

4. Compare and contrast several appropriate quality improvement models.

5. Promote a professional environment that includes accountability and high-level communication skills when involved in peer review, advocacy for patients and families, reporting of errors, and professional writing.

6. Contribute to the integration of healthcare services within systems to affect safety and quality of care to improve patient outcomes and reduce fragmentation of care.

7. Direct quality improvement methods to promote culturally responsive, safe, timely, effective, efficient, equitable, and patient-centered care.

8. Lead quality improvement initiatives that integrate socio-cultural factors affecting the delivery of nursing and healthcare services.

Sample Content

• Quality improvement models differentiating structure, process, and outcome indicators
• Principles of a just culture and relationship to analyzing errors
• Quality improvement methods and tools: Brainstorming, Fishbone cause and effect diagram, flow chart, Plan, Do Study, Act (PDSA), Plan, Do, Check, Act (PDCA),Find, Organize, Clarify, Understand, Select-Plan, Do, Check, Act (FOCUS-PDCA), Six Sigma, Lean
• High-Reliability Organizations (HROs) / High-reliability techniques
• National patient safety goals and other relevant regulatory standards (e.g., CMS core measures, pay for performance indicators, and never events)
• Nurse-sensitive indicators
• Data management (e.g., collection tools, display techniques, data analysis, trend analysis, control charts)
•Analysis of errors (e.g., Root Cause Analysis [RCA], Failure Mode Effects Analysis [FMEA], serious safety events)
• Communication (e.g., hands-off communication, chain-of-command, error disclosure)
• Participate in executive patient safety rounds
• Simulation training in a variety of settings (e.g., disasters, codes, and other high-risk clinical areas)
• RN fit for duty/impact of fatigue and distractions in care environment on patient safety

Essential IV: Translating and Integrating Scholarship into Practice

Rationale

Professional nursing practice at all levels is grounded in the ethical translation of current evidence into practice. Fundamentally, nurses need a questioning/inquiring attitude toward their practice and the care environment.

The master's-prepared nurse examines policies and seeks evidence for every aspect of practice, thereby translating current evidence and identifying gaps where evidence is lacking. These nurses apply research outcomes within the practice setting, resolve practice problems (individually or as a member of the healthcare team), and disseminate results both within the setting and in wider venues in order to advance clinical practice. Changing practice locally, as well as more broadly, demands that the master's-prepared nurse is skilled at challenging current practices, procedures, and policies. The emerging sciences referred to as implementation or improvement sciences are providing evidence about the processes that are effective when making needed changes where the change processes and context are themselves evidence based (Damschroder et al., 2009; Sobo, Bowman, & Gifford, 2008; van Achterberg, Schoonhoven, & Grol, 2008). Master's-

prepared nurses, therefore, must be able to implement change deemed appropriate given context and outcome analysis, and to assist others in efforts to improve outcomes.

Master's-prepared nurses lead continuous improvement processes based on translational research skills. The cyclical processes in which these nurses are engaged includes identifying questions needing answers, searching or creating the evidence for potential solutions/innovations, evaluating the outcomes, and identifying additional questions.

Master's-prepared nurses, when appropriate, lead the healthcare team in the implementation of evidence-based practice. These nurses support staff in lifelong learning to improve care decisions, serving as a role model and mentor for evidence-based decision making. Program graduates must possess the skills necessary to bring evidence-based practice to both individual patients for whom they directly care and to those patients for whom they are indirectly responsible. Those skills include knowledge acquisition and dissemination, working in groups, and change management.

The master's-degree program prepares the graduate to:

1. Integrate theory, evidence, clinical judgment, research, and interprofessional perspectives using translational processes to improve practice and associated health outcomes for patient aggregates.
2. Advocate for the ethical conduct of research and translational scholarship (with particular attention to the protection of the patient as a research participant).
3. Articulate to a variety of audiences the evidence base for practice decisions, including the credibility of sources of information and the relevance to the practice problem confronted.
4. Participate, leading when appropriate, in collaborative teams to improve care outcomes and support policy changes through knowledge generation, knowledge dissemination, and planning and evaluating knowledge implementation.
5. Apply practice guidelines to improve practice and the care environment.
6. Perform rigorous critique of evidence derived from databases to generate meaningful evidence for nursing practice.

Sample Content:

• Research process
• Implementation/Improvement science
• Evidence-based practice:

- Clinical decision making
- Critical thinking
- Problem identification
- Outcome measurement

• Translational science:
- Data collection in nursing practice
- Design of databases that generate meaningful evidence for nursing practice
- Data analysis in practice
- Evidence-based interventions
- Prediction and analysis of outcomes
- Patterns of behavior and outcomes
- Gaps in evidence for practice
- Importance of cultural relevance

• Scholarship:
- Application of research to the clinical setting
- Resolution of clinical problems
- Appreciative inquiry
- Dissemination of results

• Advocacy in research
• Research ethics
• Knowledge acquisition
• Group process
• Management of change
• Evidence-based policy development in practice
• Quality improvement models/methodologies
• Safety issues in practice
• Innovation processes

Essential V: **Informatics and Healthcare Technologies**

Rationale

Informatics and healthcare technologies encompass five broad areas:

- Use of patient care and other technologies to deliver and enhance care;
- Communication technologies to integrate and coordinate care;
- Data management to analyze and improve outcomes of care;
- Health information management for evidence-based care and health education; and

- Facilitation and use of electronic health records to improve patient care.

Knowledge and skills in each of these four broad areas is essential for all master's-prepared nurses. The extent and focus of each will vary depending upon the nurse's role, setting, and practice focus.

Knowledge and skills in information and healthcare technology are critical to the delivery of quality patient care in a variety of settings (IOM, 2003a). The use of technologies to deliver, enhance, and document care is changing rapidly. In addition, information technology systems, including decision-support systems, are essential to gathering evidence to impact practice. Improvement in cost effectiveness and safety depend on evidence-based practice, outcomes research, interprofessional care coordination, and electronic health records, all of which involve information management and technology (McNeil et al., 2006). As nursing and healthcare practices evolve to better meet patient needs, the application of these technologies will change as well.

As the use of technology expands, the master's-prepared nurse must have the knowledge and skills to use current technologies to deliver and coordinate care across multiple settings, analyze point of care outcomes, and communicate with individuals and groups, including the media, policymakers, other healthcare professionals, and the public. Integral to these skills is an attitude of openness to innovation and continual learning, as information systems and care technologies are constantly changing, including their use at the point of care.

Graduates of master's-level nursing programs will have competence to determine the appropriate use of technologies and integrate current and emerging technologies into one's practice and the practice of others to enhance care outcomes. In addition, the master's-prepared nurse will be able to educate other health professionals, staff, patients, and caregivers using current technologies and about the principles related to the safe and effective use of care and information technologies.

Graduates ethically manage data, information, knowledge, and technology to communicate effectively with healthcare team, patients, and caregivers to integrate safe and effective care within and across settings. Master's-prepared nurses use research and clinical evidence to inform practice decisions.

Master's-degree graduates are prepared to gather, document, and analyze outcome data that serve as a foundation for decision making and the implementation of interventions or strategies to improve care outcomes. The master's-prepared nurse uses statistical and epidemiological principles to synthesize these data, information, and knowledge to evaluate and achieve optimal health outcomes.

The usefulness of electronic health records and other health information management systems to evaluate care outcomes is improved by standardized terminologies. Integration

of standardized terminologies in information systems supports day-to-day nursing practice and also the capacity to enhance interprofessional communication and generate standardized data to continuously evaluate and improve practice (American Nurses Association, 2008). Master's-prepared nurses use information and communication technologies to provide guidance and oversight for the development and implementation of health education programs, evidence-based policies, and point-of-care practices by members of the interdisciplinary care team.

Health information is growing exponentially. Health literacy is a powerful tool in health promotion, disease prevention, management of chronic illnesses, and quality of life–all of which are hallmarks of excellence in nursing practice. Master's-prepared nurses serve as information managers, patient advocates, and educators by assisting others(including patients, students, caregivers and healthcare professionals) in accessing, understanding, evaluating, and applying health-related information. The master's-prepared nurse designs and implements education programs for cohorts of patients or other healthcare providers using information and communication technologies.

The master's-degree program prepares the graduate to:

1. Analyze current and emerging technologies to support safe practice environments, and to optimize patient safety, cost-effectiveness, and health outcomes.
2. Evaluate outcome data using current communication technologies, information systems, and statistical principles to develop strategies to reduce risks and improve health outcomes.
3. Promote policies that incorporate ethical principles and standards for the use of health and information technologies.
4. Provide oversight and guidance in the integration of technologies to document patient care and improve patient outcomes.
5. Use information and communication technologies, resources, and principles of learning to teach patients and others.
6. Use current and emerging technologies in the care environment to support lifelong learning for self and others.

Sample Content

- Use of technology, information management systems, and standardized terminology

- Use of standardized terminologies to document and analyze nursing care outcomes
- Bio-health informatics
- Regulatory requirements for electronic data monitoring systems
- Ethical and legal issues related to the use of information technology, including copyright, privacy, and confidentiality issues
- Retrieval information systems, including access, evaluation of data, and application of relevant data to patient care
- Statistical principles and analyses of outcome data
- Online review and resources for evidence-based practice
- Use and implementation of technology for virtual care delivery and monitoring
- Electronic health record, including policies related to the implementation of and use to impact care outcomes
- Complementary roles of the master's-prepared nursing and information technology professionals, including nurse informaticist and quality officer
- Use of technology to analyze data sets and their use to evaluate patient care outcomes
- Effective use of educational/instructional technology
- Point-of-care information systems and decision support systems

Essential VI: Health Policy and Advocacy

Rationale

The healthcare environment is ever-evolving and influenced by technological, economic, political, and sociocultural factors locally and globally. Graduates of master's degree nursing programs have requisite knowledge and skills to promote health, help shape the health delivery system, and advance values like social justice through policy processes and advocacy. Nursing's call to political activism and policy advocacy emerges from many different viewpoints. As more evidence links the broad psychosocial, economic, and cultural factors to health status, nurses are compelled to incorporate these factors into their approach to care. Most often, policy processes and system-level strategies yield the strongest influence on these broad determinants of health. Being accountable for improving the quality of healthcare delivery, nurses must understand the legal and political determinants of the system and have the requisite skills to partner for an improved system. Nurses' involvement in policy debates brings our professional values to bear on the process (Warner, 2003). Master's-prepared nurses will use their political efficacy and competence to improve the health outcomes of populations and improve the quality of the healthcare delivery system.

Policy shapes healthcare systems, influences social determinants of health, and therefore determines accessibility, accountability, and affordability of health care. Health policy creates conditions that promote or impede equity in access to care and health outcomes. Implementing strategies that address health disparities serves as a prelude to influencing policy formation. In order to influence policy, the master's-prepared nurse needs to work within and affect change in systems. To effectively collaborate with stakeholders, the master's-prepared nurse must understand the fiscal context in which they are practicing and make the linkages among policy, financing, and access to quality health care. The graduate must understand the principles of healthcare economics, finance, payment methods, and the relationships between policy and health economics.

Advocacy for patients, the profession, and health-promoting policies is operationalized in divergent ways. Attributes of advocacy include safeguarding autonomy, promoting social justice, using ethical principles, and empowering self and others (Grace, 2001; Hanks, 2007; Xiaoyan & Jezewski, 2006). Giving voice and persuasion to needs and preferred direction at the individual, institution, state, or federal policy level is integral for the master's-prepared nurse.

The master's-degree program prepares the graduate to:

1. Analyze how policies influence the structure and financing of health care, practice, and health outcomes.

2. Participate in the development and implementation of institutional, local, and state and federal policy.

3. Examine the effect of legal and regulatory processes on nursing practice, healthcare delivery, and outcomes.

4. Interpret research, bringing the nursing perspective, for policy makers and stakeholders.

5. Advocate for policies that improve the health of the public and the profession of nursing.

Sample Content

- Policy process: development, implementation, and evaluation
- Structure of healthcare delivery systems
- Theories and models of policy making
- Policy making environments: values, economies, politics, social
- Policy-making process at various levels of government
- Ethical and value-based frameworks guiding policy making

- General principles of microeconomics and macroeconomics, accounting, and marketing strategies.
- Globalization and global health
- Interaction between regulatory processes and quality control
- Health disparities
- Social justice
- Political activism
- Economics of health care

Essential VII: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

Rationale

In a redesigned health system a greater emphasis will be placed on cooperation, communication, and collaboration among all health professionals in order to integrate care in teams and ensure that care is continuous and reliable. Therefore, an expert panel at the Institute of Medicine (IOM) identified working in interdisciplinary teams as one of the five core competencies for all health professionals (IOM, 2003).

Interprofessional collaboration is critical for achieving clinical prevention and health promotion goals in order to improve patient and population health outcomes (APTR, 2008; 2009). Interprofessional practice is critical for improving patient care outcomes and, therefore, a key component of health professional education and lifelong learning (American Association of Colleges of Nursing & the Association of American Medical Colleges, 2010).

The IOM also recognized the need for care providers to demonstrate a greater awareness to "patient values, preferences, and cultural values," consistent with the Healthy People 2010 goal of achieving health equity through interprofessional approaches (USHHS, 2000). In this context, knowledge of broad determinants of health will enable the master's graduate to succeed as a patient advocate, cultural and systems broker, and to lead and coordinate interprofessional teams across care environments in order to reduce barriers, facilitate access to care, and improve health outcomes. Successfully leading these teams is achieved through skill development and demonstrating effective communication, planning, and implementation of care directly with other healthcare professionals (AACN, 2007).

Improving patient and population health outcomes is contingent on both horizontal and vertical health delivery systems that integrate research and clinical expertise to provide patient-centered care. Inherently the systems must include patients' expressed values, needs, and preferences for shared decision making and management of their care. As

members and leaders of interprofessional teams, the master's-prepared nurse will actively communicate, collaborate, and consult with other health professionals to manage and coordinate care across systems.

The master's-degree program prepares the graduate to:

1. Advocate for the value and role of the professional nurse as member and leader of interprofessional healthcare teams.

2. Understand other health professions' scopes of practice to maximize contributions within the healthcare team.

3. Employ collaborative strategies in the design, coordination, and evaluation of patient-centered care.

4. Use effective communication strategies to develop, participate, and lead interprofessional teams and partnerships.

5. Mentor and coach new and experienced nurses and other members of the healthcare team.

6. Functions as an effective group leader or member based on an in-depth understanding of team dynamics and group processes.

Sample Content

- Scopes of practice for nursing and other professions
- Differing world views among healthcare team members
- Concepts of communication, collaboration, and coordination
- Conflict management strategies and principles of negotiation
- Organizational processes to enhance communication
- Types of teams and team roles
- Stages of team development
- Diversity of teams
- Cultural diversity
- Patient-centered care
- Change theories
- Multiple-intelligence theory
- Group dynamics
- Power structures
- Health-work environments

Essential VIII: Clinical Prevention and Population Health for Improving Health

Rationale

Globally, the burden of illness, communicable disease, chronic disease conditions, and subsequent health inequity and disparity, is borne by those living in poverty and living in low-income and middle-income countries (Beaglehole et al., 2007; Gaziano et al., 2007; WHO, 2008). Similarly, in the U.S. population, health disparities continue to affect disproportionately low-income communities, people of color, and other vulnerable populations (USHHS, 2006).

The implementation of clinical prevention and population health activities is central to achieving the national goal of improving the health status of the population of the United States. Unhealthy lifestyle behaviors continue to account for over 50 percent of preventable deaths in the U.S., yet prevention interventions remain under-utilized in healthcare settings. In an effort to address this national goal, *Healthy People 2010* supported the transformation of clinical education by creating an objective to increase the proportion of schools of medicine, nursing, and other health professionals that have a basic curriculum that includes the core competencies in health promotion and disease prevention (Allan et al., 2004; USHHS, 2000). In the *Healthy People 2010 Midcourse Review,* health disparities are not declining overall, reiterating the necessity to implement and evaluate the effectiveness of disease prevention and health promotion efforts (USHHS, 2006). Cognizant of these trends and successive health outcome data, it will be necessary to re-evaluate these data and for nursing to re-assess its leadership role and responsibility toward improving the population's health.

The Healthy People Curriculum Task Force developed the *Clinical Prevention and Population Health Curriculum Framework,* which identifies four focal areas, including individual and population-oriented preventive interventions. This curriculum guides the development and evaluation of educational competencies expected of health professionals in clinical prevention and population health, and endorsed by clinical professional associations, including AACN (Allan, 2004; APTR, 2009).

As the diversity of the U.S. population increases, it is crucial that the health system provides care and services that are equitable and responsive to the unique cultural and ethnic identity, socio-economic condition, emotional and spiritual needs, and values of patients and the population (IOM, 2001; 2003). Nursing leadership within health systems is required to design and ensure the delivery of clinical prevention interventions and population-based care that promotes health, reduces the risk of chronic illness, and prevents disease. Acquiring the skills and knowledge necessary to meet this demand is essential for nursing practice (Allan et al., 2004; Allan et al., 2005).

The master's-prepared nurse applies and integrates broad, organizational, patient-centered, and culturally responsive concepts into daily practice. Mastery of these concepts based on a variety of theories is essential in the design and delivery (planning, management, and evaluation) of evidence-based clinical prevention and population care and services to individuals, families, communities, and aggregates/clinical populations nationally and globally.

The master's-degree program prepares the graduate to:

1. Synthesize broad ecological, global and social determinants of health; principles of genetics and genomics; and epidemiologic data to design and deliver evidence-based, culturally relevant clinical prevention interventions and strategies.

2. Evaluate the effectiveness of clinical prevention interventions that affect individual and population-based health outcomes using health information technology and data sources.

3. Design patient-centered and culturally responsive strategies in the delivery of clinical prevention and health promotion interventions and/or services to individuals, families, communities, and aggregates/clinical populations.

4. Advance equitable and efficient prevention services, and promote effective population-based health policy through the application of nursing science and other scientific concepts.

5. Integrate clinical prevention and population health concepts in the development of culturally relevant and linguistically appropriate health education, communication strategies, and interventions.

Sample Content

- Environmental health
- Epidemiology
- Biostatistical methods and analysis
- Disaster preparedness and management
- Emerging science of complementary and alternative medicine and therapeutics
- Ecological model of the social determinants of health
- Teaching and learning theories
- Health disparities, equity and social justice
- Program planning, design, and evaluation
- Quality improvement and change management
- Health promotion and disease prevention
- Application of health behavior modification
- Health services financing
- Health information management

- Ethical frameworks
- Interprofessional collaboration
- Theories and applications of health literacy and health communication
- Genetics/genomic risk assessment for vulnerable populations
- Organization of clinical, public health, and global systems
- Frameworks for community and political engagement, advocacy, and empowerment
- Frameworks for addressing global health and emerging health issues
- Nursing Theories

Essential IX: Master's-Level Nursing Practice

Rationale

Essential IX describes master's-level nursing practice at the completion of the master's program in nursing. Nursing practice at the master's level is broadly defined as any form of nursing intervention that influences healthcare outcomes for individuals, populations, or systems. Master's-level nursing graduates must have an expanded level of understanding of nursing and related sciences built on the *Essentials of Baccalaureate Education for Professional Nursing Practice*. Master's-prepared nurses have developed a deeper understanding of the nursing profession based on reflective practices and continue to develop their own plans for lifelong learning and professional development.

Nursing-practice interventions include both direct and indirect care components. As a practice discipline, clinical care is the core business of nursing practice whether the graduate is focused on the provision of care to individuals, population-focused care, administration, informatics, education or health policy. Master's nursing education prepares graduates to implement safe, quality care in a variety of settings and roles.

This Essential includes the *practice-focused* outcomes for all master's-prepared nurses. Master's level nursing practice builds upon the practice competencies delineated in the *Essentials of Baccalaureate Education for Professional Nursing Practice* (AACN, 2008). Master's-prepared nurses possess a mastery level of understanding of nursing theory, science and practice. Recent and evolving trends in health care require integration of key concepts into all master's-prepared nursing practice. This includes concepts related to quality improvement, patient safety, economics of health care, environmental science, epidemiology, genetics/genomics, gerontology, global healthcare environment and perspectives, health policy, informatics, organizations and systems, communication, negotiation, advocacy, and interprofessional practice.

Master's nursing education prepares graduates to influence the delivery of safe, quality care to diverse populations in a variety of settings and roles. The realities of a global society, expanding technologies, and an increasingly diverse population require these

nurses to master complex information, to coordinate a variety of care experiences, to use technology for healthcare information and evaluation of nursing outcomes, and to assist diverse patients with managing an increasingly complex system of care. The master's-prepared nurse is accountable for assessing the impact of research and advocates for participants, personnel, and systems integrity. As master's-prepared nurses practicing in any setting or role, graduates must understand the foundations of care and the art and science of nursing practice as it relates to individuals, families, and clinical populations within an increasingly complex healthcare system. The extraordinary explosion of knowledge in the field also requires an increased emphasis on lifelong learning.

Essential IX specifies the foundational practice competencies that cut across all areas of practice and are seen as requisite for all master's level nursing practice. Master's-degree nursing programs provide learning experiences that are based in a variety of settings. These learning experiences will be integrated throughout the master's program of study, to provide additional practice experiences beyond those acquired in a baccalaureate or entry-level nursing program.

The master's-degree program prepares the graduate to:

1. Conduct a comprehensive and systematic assessment as a foundation for decision making.

2. Apply the best available evidence from nursing and other sciences as the foundation for practice.

3. Advocate for patients, families, caregivers, communities and members of the healthcare team.

4. Use information and communication technologies to advance patient education, enhance accessibility of care, analyze practice patterns, and improve health care outcomes, including nurse sensitive outcomes.

5. Use leadership skills to teach, coach, and mentor other members of the healthcare team.

6. Use epidemiological, social, and environmental data in drawing inferences regarding the health status of patient populations and interventions to promote and preserve health and healthy lifestyles.

7. Use knowledge of illness and disease management to provide evidence-based care to populations, perform risk assessments, and design plans or programs of care.

8. Incorporate core scientific and ethical principles in identifying potential and actual ethical issues arising from practice, including the use of technologies, and in assisting patients and other healthcare providers to address such issues.

9. Apply advanced knowledge of the effects of global environmental, individual and population characteristics to the design, implementation, and evaluation of care.

10. Employ knowledge and skills in economics, business principles, and systems in the design, delivery, and evaluation of care.

11. Apply theories and evidence-based knowledge in leading, as appropriate, the healthcare team to design, coordinate, and evaluate the delivery of care.

12. Apply learning, and teaching principles to the design, implementation, and evaluation of health education programs for individuals or groups in a variety of settings.

13. Establish therapeutic relationships to negotiate patient-centered, culturally appropriate, evidence-based goals and modalities of care.

14. Design strategies that promote lifelong learning of self and peers and that incorporate professional nursing standards and accountability for practice.

15. Integrate an evolving personal philosophy of nursing and healthcare into one's nursing practice.

Sample Content

- Principles of leadership, including horizontal and vertical leadership
- Effective use of self
- Advocacy for patients, families, and the discipline
- Conceptual analysis of the master's-prepared nurse's role(s)
- Principles of lateral integration of care
- Clinical Outcomes Management, including the measurement and analysis of patient outcomes
- Epidemiology
- Biostatistics
- Health promotion and disease reduction/ prevention management for patients and clinical populations
- Risk assessment
- Health literacy
- Principles of mentoring, coaching and counseling
- Principles of adult learning
- Evidence-based practice:
  - Clinical decision making and judgment
  - Critical thinking
  - Problem Identification
  - Outcome measurement

- Care environment management
- Team coordination, including delegation, coaching, interdisciplinary care, group process
- Negotiation, understanding group dynamics, conflict resolution
- Healthcare reimbursement and reform and how it impacts practice
- Resource allocation
- Use of healthcare technologies to improve patient care delivery and outcomes
- Healthcare finance and socioeconomic principles
- Principles of quality management/risk reduction/patient safety
- Informatics principles and use of standardized language to document care and outcomes of care
- Educational strategies
- Learning styles
- Cultural competence/awareness
- Global health care environment, international law, geopolitics, and geo-economics
- Nursing and other scientific theories
- Appreciative inquiry
- Reflective practices

Clinical/Practice Learning Expectations for Master's Programs

All graduates of a master's nursing program must have supervised clinical experiences, which are sufficient to demonstrate mastery of the Essentials. The term "supervised" is used broadly and can include precepted experiences with faculty site visits. These learning experiences may be accomplished through diverse teaching methodologies, including face-to-face and simulated means. The primary goals of clinical learning experiences are the opportunities to:

- Lead change to improve quality care outcomes,
- Advance a culture of excellence through lifelong learning
- Build and lead collaborative interprofessional care teams,
- Navigate and integrate care services across the healthcare system,
- Design innovative nursing practices, and
- Translate evidence into practice.

Mastery in nursing practice is acquired by the student through a series of applied learning experiences designed to allow the learner to integrate cognitive learning with the

affective and psychomotor domains of nursing practice. The clinical/practice experiences allow the learner to experiment and acquire competence with new knowledge and skills. These experiences provide the opportunity for delivery of services or programs of wide diversity and focus and may occur in multiple settings including hospitals, community settings, public health departments, primary care practice offices, integrated health care systems, and an array of other settings.

The clinical experience is an opportunity to integrate didactic learning, promote innovative thinking, and test new potential solutions to clinical/practice or system issues. Therefore, the development of new skills and practice expectations can be facilitated through the use of creative learning opportunities in diverse settings. These learning opportunities may include experiences in business, industries, and with disciplines that are recognized as innovators in safety, quality, finance, management, or technology. Through these experiences, the student may develop an appreciation and use the wisdom from other industries and disciplines in nursing practice that can occur through application of knowledge or evidence developed in other industries.

These learning experiences also can occur using simulation designed as a mechanism for verifying early mastery of new levels of practice or designed to create access to data or health care situations that are not readily accessible to the student. These experiences may include simulated mass casualty events, simulated database problems, simulated interpersonal communication scenarios, and other new emerging learning technologies. The simulation is an adjunct to the learning that will occur with direct human interface or human experience learning.

Development of mastery also is facilitated through the use of focused and sustained clinical experiences, which provide the learner with the opportunity to master the patient care delivery skills as well as the system assessment and intervention skills which require an understanding of organizational dynamics. These immersion experiences afford the student an opportunity to focus on a population of interest and a specific role. Most often, the immersion experience occurs toward the end of the program as a culminating synthesis experience for the program. In some instances, the master's student may engage in a clinical experience at the student's employing agency. This arrangement requires a systematic assessment of that setting's ability to allow the student to engage in new practice activities, framed by the learning objectives of the program, and overseen or supervised by a mentor/preceptor or faculty member. This type of learning experience will be designed to assist the learner to acquire master's-degree nursing knowledge and practice master's-degree roles.

Supervised clinical experiences will be verified and documented. One example of such documentation is the use of a professional portfolio. This portfolio may also provide a

foundation or template for the graduate's future professional career trajectory and experiences.

Summary

The Essentials of Master's Education in Nursing serves to transform nursing education and is critical to the innovations needed in health care. Due to the ever-changing and complex healthcare environment, this document emphasizes that the master's-prepared nurse will be able to: 1) lead change for quality care outcomes; 2) advance a culture of excellence through lifelong learning; 3) build and lead collaborative interprofessional care teams; 4) navigate and integrate care services across the healthcare system; 5) design innovative nursing practices; and 6) translate evidence into practice. Master's degree nursing programs prepare graduates with enhanced nursing knowledge and skills to address the evolving needs of the healthcare system.

Essentials I-IX delineate the outcomes expected of graduates of master's nursing programs. Achievement of these outcomes will enable graduates to lead and practice in complex healthcare systems in a variety of direct and/or indirect care roles. The breadth of knowledge, the extent of experiential learning, and therefore the time needed to accomplish each Essential will vary, and each Essential does not require a separate course for achievement of the outcomes.

Clinical experiences in master's programs are opportunities to integrate didactic learning, promote innovative thinking and test new potential solutions to clinical/practice or system issues. Therefore, the development of new skills and practice expectations can be facilitated through the use of creative learning opportunities in diverse settings. In addition, the extraordinary explosion of knowledge in the healthcare field requires the master's-prepared nurse to have an increased emphasis on lifelong learning and professional development.

Glossary

Administration: Administration comprises working with and through others to achieve the mission, values, and vision of an organization. Administration is an executive function within an organization and has ultimate accountability for defining and achieving the organization's strategic plan. Administration designates responsibility for implementing organizational goals. (Council on Graduate Education for Administration in Nursing, 2010)

Advanced Nursing Practice: Any form of nursing intervention that influences health care outcomes for individuals or populations, including the direct care of individual patients,

management of care for individuals and populations, administration of nursing and health care organizations, and the development and implementation of health policy (AACN, 2004).

Advanced Practice Registered Nurse (APRN): a nurse:
1. who has completed an accredited graduate-level education program preparing him/her for one of the four recognized APRN roles;
2. who has passed a national certification examination that measures APRN, role and population-focused competencies and who maintains continued competence as evidenced by recertification in the role and population through the national certification program;
3. who has acquired advanced clinical knowledge and skills preparing him/her to provide direct care to patients, as well as a component of indirect care; however, the defining factor for all APRNs is that a significant component of the education and practice focuses on direct care of individuals;
4. whose practice builds on the competencies of registered nurses (RNs) by demonstrating a greater depth and breadth of knowledge, a greater synthesis of data, increased complexity of skills and interventions, and greater role autonomy;
5. who is educationally prepared to assume responsibility and accountability for health promotion and/or maintenance as well as the assessment, diagnosis, and management of patient problems, which includes the use and prescription of pharmacologic and non-pharmacologic interventions;
6. who has clinical experience of sufficient depth and breadth to reflect the intended license; and
7. who has obtained a license to practice as an APRN in one of the four APRN roles: certified registered nurse anesthetist (CRNA), certified nurse-midwife (CNM), clinical nurse specialist (CNS), or certified nurse practitioner (CNP).
(APRN Consensus Model, 2008)

Advocacy**:** Defending or maintaining a cause or proposal on behalf of the patient, client, or profession to achieve societal or other goals (Interprofessional Professionalism Collaborative, 2008)

Aggregate(s): A community or a group of individuals defined by shared characteristics such as, age, culture, diagnosis, gender, geography, or values (adapted from Allan et al., 2004).

Altruism: A concern for the welfare and well being of others. In professional practice, altruism is reflected by the nurse's concern and advocacy for the welfare of patients, other nurses, and other healthcare providers (American Association of Colleges of Nursing, 2008, p. 27).

Autonomy: The right to self-determination. Professional practice reflects autonomy when the nurse respects patients' rights to make decisions about their health care (AACN, 2008, p. 27).

Care Coordination: Ensures patients receive well-coordinated care across all healthcare organizations, settings, and levels of care (National Priorities Partnership, 2008).

Clinical Practice: The care of individuals or families, irrespective of setting.

Clinical Prevention: Health promotion and risk reduction/illness prevention for individuals, families, aggregates, or clinical populations (Allan et al, 2004).

Clinical Preventive Services: Screening, vaccination, counseling, or other preventive service delivered to one patient at a time by a healthcare practitioner in an office, clinic, healthcare system, or other practice environment (adapted from Centers for Disease Control and Prevention, 2009). See also Community Preventive Services.

***Community Preventive Services*:** Interventions that provide or increase the provision of preventive services such as screening, education, counseling, or other programs to groups of people, in community settings, healthcare systems, or other practice environments (adapted from Centers for Disease Control and Prevention, 2009). See also Clinical Preventive Services.

Culturally Responsive: Culturally responsive refers to being cognizant of patients' norms, beliefs, language, and behaviors that not only shape the meaning of their health but also their health-seeking and health-related behaviors. The constructs reinforce the idea that each practitioner should be engaged continuously in self reflection about their own personal beliefs, norms, behaviors and language and how together they guide their perceptions, beliefs, and interactions with patients. The culturally responsive practitioner focuses on the importance of building upon each patient's personal strengths as well as available resource and supports which provide the foundational underpinning of these respective strengths. The culturally responsive practitioner also engages in a dynamic, respectful, and reciprocal dialogue with each person irrespective of their race, ethnicity, gender, social position, sexual orientation, immigration status, and educational level (Ring et al, 2009)**.**

Delivery: The planning, management, and evaluation of evidence-based practice and clinical care across healthcare settings.

Direct Care/ Indirect Care:

Direct care refers to nursing care provided to individuals or families that is intended to achieve specific health goals or achieve selected health outcomes. Direct care may be provided in a wide range of settings, including acute and critical care, long term care, home health, community-based settings, and educational settings (AACN, 2004, 2006; Suby, 2009; Upenieks, Akhavan, Kotlerman et al., 2007).

Indirect care refers to nursing decisions, actions, or interventions that are provided through or on behalf of individuals, families, or groups. These decisions or interventions create the conditions under which nursing care or self care may occur. Nurses might use administrative decisions, population or aggregate health planning, or policy development to affect health outcomes in this way. Nurses who function in administrative capacities are responsible for direct care provided by other nurses. Their administrative decisions create the conditions under which direct care is provided. Public health nurses organize care for populations or aggregates to create the conditions under which care and improved health outcomes are more likely. Health policies create broad scale conditions for delivery of nursing and health care (AACN, 2004, 2006; Suby, 2009; Upenieks, Akhavan, Kotlerman et al., 2007).

***Diverse populations*:** Diversity is an all-inclusive concept, and includes differences in race, color, ethnicity, national origin, immigration status (refugee, sojourner, immigrant, or undocumented), religion, age, gender, gender identity, sexual orientation, ability/disability, political beliefs, social and economic status, education, occupation, spirituality, marital and parental status, urban versus rural residence, enclave identity, and other attributes of groups of people in society (Giger et al., 2007; Purnell & Paulanka, 2008).

Ethics: The rules or principles that govern right conduct (Kozier & Erb, 2007).

Evidenced-based Practice: The integration of best research evidence, clinical research, and patient values in making decisions about the care of individual patients (IOM, 2003).

Genetics: Study of individual genes and their impact on relatively rare single-gene disorders (Guttmacher & Collins, 2002).

Genomics: Study of all the genes in the human genome together, including their interactions with each other, the environment, and the influence of other psychosocial and cultural factors (Guttmacher & Collins, 2002).

***Health Disparities*:** Health disparities are differences in the incidence, prevalence, mortality, and burden of disease and other adverse health conditions that exist among specific population groups in the United States (National Institutes of Health, 2002-2006). The definition of health disparities assumes not only a difference in health but a difference in which disadvantaged social groups—who have persistently experienced social disadvantage or discrimination—systematically experience worse health or greater health risks than more advantaged social groups (Braveman, 2006). Consideration of who is considered to be within a health disparity population has policy and resource implications (American Association of Colleges of Nursing, 2009).

Health Education Programs: Any program designed to educate individuals, families, groups, communities, health professionals to improve health outcomes.

Health Equity: A basic principle that all people have a right to health. Health equity concerns those differences in population health that can be traced to unequal economic and social conditions and are systemic and avoidable and thus inherently unjust and unfair (Brennan, Baker, & Meltzer, 2008).

Health Literacy: The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (U.S. Department of Health and Human Services, 2000b).

***High-Reliability Organizations (HRO)*:** Organizations or systems that operate in hazardous conditions but have fewer than their fair share of adverse events (Weick, 2001; Reason, 2001). Commonly discussed examples include air traffic control systems, nuclear power plants, and naval aircraft carriers (LaPorte, 1988; Roberts, 1990). It is worth noting that, in the patient safety literature, HROs are considered to operate with nearly failure-free performance records, not simply better than average ones. These organizations achieve consistently safe and effective performance records despite unpredictable operating environments or intrinsically hazardous endeavors. Some common features of HROs include:

- *Preoccupation with failure*—the acknowledgment of the high-risk, error-prone nature of an organization's activities and the determination to achieve consistently safe operations.
- *Commitment to resilience*—the development of capacities to detect unexpected threats and contain them before they cause harm, or bounce back when they do.
- *Sensitivity to operations*—an attentiveness to the issues facing workers at the frontline. This feature comes into play when conducting analyses of specific events but also in connection with organizational decision making. Management units at the frontline are given some autonomy in identifying and responding to threats, rather than adopting a rigid top-down approach.
- *A culture of safety*—the atmosphere in which individuals feel comfortable drawing attention to potential hazards or actual failures without fear of censure from management (Agency for Healthcare Research and Quality, 2009).

Horizontal and Vertical Health Delivery Systems: Health systems are comprised of a "horizontal system" focused on integrated resource sharing health services, providing prevention and care for prevailing health problems, and of "vertical systems" focused on disease specific interventions for specific health conditions (World Health Organization, 2010).

Human Dignity: Respect for the inherent worth and uniqueness of individuals and populations. In professional practice, concern for human dignity is reflected when the

nurse values and respects all patients and colleagues (American Association of Colleges of Nursing, 2008, p. 28).

Informatics: The use of information and technology to communicate, manage knowledge, mitigate error, and support decision making (Quality and Safety Education for Nurses, 2010).

Integrity: Acting in accordance with an appropriate code of ethics and accepted standards of practice. Integrity is reflected in professional practice when the nurse is honest and provides care based on an ethical framework that is accepted within the profession (AACN, 2008, p. 28).

Interprofessional: Working across healthcare professions to cooperate, collaborate, communicate, and integrate care in teams to ensure that care is continuous and reliable. The team consists of the patient, the nurse, and other healthcare providers as appropriate (IOM, 2003)

***Just Culture*:** This phrase was popularized in the patient safety lexicon by a report (Marx, 2001) that outlined principles for achieving a culture in which frontline personnel are comfortable disclosing errors—including their own—while maintaining professional accountability. The examples in the report relate to transfusion safety, but the principles clearly generalize across domains within health care organizations.

Traditionally, healthcare's culture has held individuals accountable for all errors or mishaps that befall patients under their care. By contrast, a just culture recognizes that individual practitioners should not be held accountable for system failings over which they have no control. A just culture also recognizes many individual or "active" errors represent predictable interactions between human operators and the systems in which they work. However, in contrast to a culture that touts "no blame" as its governing principle, a just culture does not tolerate conscious disregard of clear risks to patients or gross misconduct.

In summary, a just culture recognizes that competent professionals make mistakes and acknowledges that even competent professionals will develop unhealthy norms but has zero tolerance for reckless behavior (Agency for Healthcare Research and Quality, 2009).

Leadership: Leadership is the process of influencing others toward the attainment of one or more goals. Leadership comprises two types: formal and informal. Formal leadership occurs through official titular designations within an organization or society. Informal leadership occurs when the perceptions and actions of others are influenced by individuals without such official organizational or societal designations. Leadership is not limited to the accomplishment of organizational goals (Council on Graduate Education for Administration in Nursing, 2010).

Liberal Education: A comprehensive sets of aims and outcomes that are essential both for a globally engaged democracy and for a dynamic, innovation-fueled economy (American Association of Colleges &Universities, 2007).

Management: Management is the process of aligning resources with needs to attain specific goals. Management includes planning, organizing, motivating, monitoring, and evaluating human and material resources. Although management usually refers to a mid-level formal leadership function within an organization, it is also the process used at any level to align and allocate resources (Council on Graduate Education for Administration in Nursing, 2010).

Metaparadigm: Represents the worldview of a discipline (the most global perspective that subsumes more specific views and approaches to the central concepts with which it is concerned). There is considerable agreement that nursing's metaparadigm consists of the central concepts of person, environment, health, and nursing (Powers & Knapp, 1990, p. 87).

Macrosystem: Actions taken by senior leaders who are responsible for organization-wide performance (Nelson et al, 2007, p.205).

Mesosystem: Actions taken by the midlevel leaders who are responsible for large clinical programs, clinical support services, and administrative services (Nelson et al., 2007, p.205)

Microsystem: Clinical Microsystems are the small, functional frontline units that provide most health care to most people (Nelson et al., 2007, p.3).

Nursing Science: A basic science that is the substantive, discipline-specific knowledge that focuses on the human-universe-health process articulated in nursing frameworks and theories. The discipline-specific knowledge resides within schools of thought that reflect differing philosophical perspectives that give rise to ontological, epistemological, and methodological processes for the development and use of knowledge concerning nursing's unique phenomenon of concern (Parse et al., 2000).

Organizational Science: An interdisciplinary field of inquiry focusing on employee and organizational health, well-being, and effectiveness. Organizational Science is both a science and a practice, founded on the notion that enhanced understanding leads to applications and interventions that benefit the individual, work groups, the organization, the customer, the community, and the larger society in which the organization operates (University of North Carolina, 2009).

Patient: The term refers to the recipient of a healthcare service or intervention at the individual, family, community, aggregate/population level. Further, patients may function in independent, interdependent, or dependent roles, and may seek or receive nursing

interventions related to disease prevention, health promotion, or health maintenance, as well as illness and end-of-life care. Depending on the context or setting, patients may, at times, more appropriately be termed clients, *consumers,* or clients of nursing services (AACN, 1998, p. 2).

Population: Refers to a set of persons having a common personal or environmental characteristic. The common characteristic might be anything thought to relate to health, such as age, race, sex, social class, medical diagnosis, level of disability, exposure to a toxin, or participation in a health-seeking behavior, such as smoking cessation. It is the researcher or health practitioner who identifies the characteristic and set of persons that make up this population (Maurer & Smith, 2004).

Population-based Health: Inclusive of aggregates, community, and/or clinical populations that consider the environmental, occupational, and cultural, socio-economic and other dimensions of health (Allan et al., 2004), and derives evidence from population level data and statistics (Starfield, Hyde, Gervas, & Heath, 2007).

***Professionalism*:** The consistent demonstration of core values evidenced by nurses working with other professionals to achieve optimal health and wellness outcomes in patients, families, and communities by wisely applying principles of altruism, excellence, caring, ethics, respect, communication, and accountability (Interprofessional Professionalism Collaborative, 2008). Professionalism involves accountability for one's self and nursing practice, including continuous professional engagement and lifelong learning. As discussed in the American Nurses Association Code of Ethics for Nursing (2005, p.16), "The nurse is responsible for individual nursing practice and determines the appropriate delegation of tasks consistent with the nurse's obligation to provide optimum patient care." Also, inherent in accountability is responsibility for individual actions and behaviors, including civility. In order to demonstrate professionalism, civility must be present. Civility is a fundamental set of accepted behaviors for a society/culture upon which professional behaviors are based (Hammer, 2003; American Association of Colleges of Nursing, 2008).

***Quality Improvement (QI)*:** In health care, QI refers to giving patients the appropriate care at the appropriate time and place with the appropriate mix of information and supporting resources. In many cases, healthcare systems are overly cumbersome, fragmented, and indifferent to patients' needs. Quality improvement tools range from those that simply make recommendations but leave decision-making largely in the hands of individual practitioners (e.g., practice guidelines) to those that prescribe patterns of care (e.g., critical pathways). Typically, QI efforts are strongly rooted in evidence-based procedures and rely extensively on data collected about processes and outcomes (Robert Wood Johnson Foundation, 2009).

Risk Management/Risk Mitigation: A managed program or effort directed at reducing risk, avoiding accidents, and making effective use of purchased insurance (American Nurses Association, 2009).

Self Mastery: The intentional growth and development of physical, emotional, mental, and spiritual being. It allows for flexibility; comfort with chaos, ambiguity, and uncertainty; and the ability to let go of control. The journey of self-mastery increases our capacity to support and move others beyond fear (Viney & Rivers, 2007).

Social Justice: This concept relates to upholding moral, legal, and humanistic principles. This value is reflected in professional practice when assuring equal treatment under the law and equal access to quality health care (American Association of Colleges of Nursing, 2007). Social Justice is acting in accordance with fair treatment regardless of economic status, race, ethnicity, age, citizenship, disability, or sexual orientation" (American Association of Colleges of Nursing, 2008, p. 28).

Translational research: Translational research includes two areas of translation. One is the process of applying discoveries generated during research in the laboratory, and in preclinical studies, to the development of trials and studies in humans. The second area of translation concerns research aimed at enhancing the adoption of best practices in the community.

Values: Something of worth; a belief held dearly by a person (Kozier & Erb, 2007).

***Vulnerable Populations*:** Refers to social groups with increased relative risk (e.g., exposure to risk factors) or susceptibility to health-related problems. Vulnerability is evidenced in higher comparative mortality rates, lower life expectancy, reduced access to care, and diminished quality of life (UCLA School of Nursing, 2008).

References

Advanced Practice Consensus Work Group & National Council of State Boards of Nursing. (2008). *Consensus model for regulation of APRNs: Licensure, accreditation, certification, & education*. Retrieved August 3, 2010 from http://www.aacn.nche.edu/Education/

Agency for Healthcare Research and Quality. (2009). AHRQ patient safety network Glossary. Retrieved June 20, 2009, http://www.psnet.ahrq.gov/glossary.aspx#J

Agency for Healthcare Research and Quality. (2009). The guide to clinical preventive services 2009: Recommendations of the U.S. Preventive Services task force. Retrieved December 06, 2009, from http://www.ahrq.gov/clinic/USpstfix.htm.

Aiken, L. H, Clarke, S. P., Cheung, R. B., Sloane, D. M., & Silber, J. H. (2003). Education levels of hospital nurses and surgical patient mortality. *Journal of the American Medical Association*, *290*(12), 1617-1623.

Allan, J., Agar Barwick, T., Cashman, S., Cawley, J. F., Day, C., Douglass, C. W. et al. (2004). Clinical prevention and population health. *American Journal of Preventive Medicine, 27*(5), 470-481.

Allan, J., Stanley, J., Crabtree, M., Werner, K., & .Swenson, M. (2005). Clinical prevention and population health curriculum framework: The nursing perspective. *Journal of Professional Nursing*, *21*(5), 259-267.

Alliance for Nursing Informatics. (2010). *ANI and the TIGER initiative*. Retrieved July 29, 2010, from http://www.allianceni.org/tiger.asp.

American Academy of Nurses. (2009). *Nurses transforming health care using genetics and Genomics*. Washington, DC: Author.

American Association of Colleges of Nursing. (2004). *Position statement on the practice doctorate in nursing.* Washington, DC: Author.

American Association of Colleges of Nursing. (2006). *Essentials of doctoral education for advanced nursing practice*. Washington, DC: Author.

American Association of Colleges of Nursing. (2007). *White paper on the education and role of the clinical nurse leader™.* Washington, DC: Author.

American Association of Colleges of Nursing. (2008). *The essentials of baccalaureate* education for professional nursing practice. Washington, DC: Author.

American Association of Colleges of Nursing. (2008). *Position statement on the preferred vision of the professoriate in baccalaureate and graduate nursing programs.* Washington, DC: Author American Association of Colleges of Nursing.

American Association of Colleges of Nursing (2009). *Toolkit of resources for cultural competent education for baccalaureate nurses*. Washington, DC: Author.

American Association of Colleges of Nursing, (2010). *Establishing a culturally competent master's and doctorally prepared nursing workforce.* Washington, DC: Author.

American Association of Colleges of Nursing and Association of American Medical Colleges. (2010). Lifelong learning in medicine and nursing, Final conference report. Retrieved August 2, 2010, from http://www.aacn.nche.edu/Education/pdf/MacyReport.pdf.

American Association of Colleges of Nursing, (2010). Position statement on the research-focused doctoral programming in nursing: pathways to excellence. Washington, DC: Author.

American Association for the History of Nursing (2001). Position paper on history in the curriculum. Access at http://www.aahn.org/position.html

American Nurses Association. (2005). *Code of ethics for nurses with interpretive statements.* Silver Spring, MD: Author

American Nurses Association. (2009). *The nursing risk management series: Common insurance and legal terms*. Retrieved July 8, 2009, from http://www.nursingworld.org/mods/archive/mod311/cerm2at1.htm

APRN Joint Dialogue Group (2008). *Consensus Model for APRN Regulation: Licensure, Accreditation, Certification, & Education*. Retrieved February 2, 2011, from http://www.aacn.nche.edu/Education/pdf/APRNReport.pdf (page 7)Association for Prevention Teaching and Research. (2009). *Clinical prevention and population health curriculum framework*. Retrieved August 3, 2010, from http://www.atpm.org/CPPH_Framework/index.html

Association of American Colleges and Universities. (2007). *College learning for the new global century: A report from the national leadership council for Liberal Education & America's Promise.* Washington, DC: Author.

Bakken, S. (2006). Informatics for patient safety: A nursing research perspective. *Annual Review of Nursing Research, 24*, 219-254.

Bakken, S., Stone, P., & Larson, E. (2007). A nursing informatics research agenda for 2008-18: Contextual influences and key components. *Nursing Outlook, 56*(5), 206-214.

Bartels, J. E. (2005). Educating nurses for the 21st century. *Nursing and Health Sciences*, *7*, 221-225.

Beaglehole, R., Ebrahim, S., Reddy, S., Voute, J., & Leeder. S. (2007). Prevention of chronic disease: A call to action. *Lancet, 370*, 2152-2157.

Benner, P., Sutphen, M., Leonard, V., & Day, L. (2009). *Educating nurses: A call for radical transformation.* San Francisco, CA: Jossey-Bass.

Braveman, P. (2006). Health disparities and health equity: Concepts and measurement**.** *Annual Review of Public Health, 27*, 167-194**.**

Brennan Ramirez, L. K., Baker, E. A., & Meltzer, M. (2008). *Promoting health equity: A resource to help communities address social determinants of health*. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention.

Brown, S.J. (2009). *Evidenced-based nursing: The research-practice connection*. Norwich, VT: Jones & Bartlett.

The California Endowment. (2003). *Principles and recommended standards for cultural competence education of health care professionals*. Woodland, CA: Author.

Center for Clinical and Translational Sciences (2010). What is translational research? Retrieved August 3, 2010, from http://ccts.uth.tmc.edu/what-is-translational-research

Center for Vulnerable Population Research, UCLA School of Nursing. (2008). *Who are vulnerable populations?* Retrieved August 18, 2008, from http://www.nursing.ucla.edu/orgs/cvpr/whoarevulnerable.html

Centers for Disease Control & Prevention. (2009). The guide to community preventive services glossary. Retrieved December 06, 2009 from http://www.thecommunityguide.org/about/glossary.html.

Consensus Panel on Genetic/Genomic Nursing Competencies. (2009). *Essentials of genetic and genomic nursing: Competencies, curricula guidelines, and outcome indicators, 2nd Ed*. Silver Spring, MD: American Nurses Association.

Cronenwett, L., Sherwood, G., Barnsteiner, J., Disch, J., Johnson, J., Mitchell, P. et al. (2007). Quality and safety education for nurses. *Nursing Outlook, 5*5(3), 122-131.

Cronenwett, L., Sherwood, G., Pohl, J., Barnsteiner, J., Moore, S., Sullivan, et al. (2009). Quality and safety education for advanced nursing practice. *Nursing Outlook,* 57(6), 338-348.

Damschroder, L., Aron, D., Keith, R., Kirsh, S., Alexander, J., & Lowery, J. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science, *Implementation Science, 4*, 50-64.

Donabedien, A. (1983). Quality assessment and monitoring. *Evaluation & the Health Profession*, *6*(3), 363-375.

Fazzi, R., Agoglia, R., & Mazza, G. (2006). Briggs National Quality Improvement Hospitalization reduction. *Caring*, *25*(2), 70-75.

Gallup Poll. (2006). Honesty/ethics in professions. Retrieved August 18, 2008, from http://www.galluppoll.com/content/?ci=1654&pg=1

Gaziano, T., Galea, G., & Reddy, K. S. (2007). Scaling up for interventions for chronic disease prevention: The evidence. *Lancet, 370*, 1939-1946.

Giger, J., Davidhizar, R., Purnell, L., Harden, J., Phillips, J., & Strickland, O. (2007). American Academy of Nursing Expert Panel Report: Developing cultural competence to eliminate health disparities in ethnic minorities and other vulnerable populations. *Journal of Transcultural Nursing, 18*(2), 95-102.

Grace, P. J. (2001). Professional advocacy: Widening the scope of accountability. *Nursing Philosophy, 2*(2), 151-162.

Greco, K. E., & Salveson, C. (2009). Identifying genetics and genomics nursing competencies common among published recommendations. *Journal of Nursing Education, 48*(10), 557-565.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *The Milbank Quarterly*, *82*(4), 581-629.

Guttmacher, A., & Collins, F. (2002). Genomic medicine a primer. *New England Journal of Medicine, 347*, 1512-20.

Hammer, D. (2003). Civility and professionalism. In A. Berger (Ed.), *Promoting Civility in Pharmacy Education* (pp.7191). Binghamton: Pharmaceutical Products Press.

Hanks, R.G. (2007). Barriers to nursing advocacy: A concept analysis. *Nursing Forum 42*(4), 171-178.

Hebda, T., & Calderone, T.L. (2010). What nurse educators need to know about the TIGER initiative. *Nurse Educator, 35*(2), 56-60.

Hughes, R. G., & Blegen, M. (2008). Medication administration safety. In R.G. Hughes (Ed.), *Patient safety and quality: An evidence-based handbook for nurses.* Rockville, MD: Agency for Healthcare Research and Quality.

Institute for Health Metrics. (2007). Incentives for quality care—Is this the future? Retrieved from http://www.healthmetrics.org/eNews/index.html.

Institute of Medicine. (2000). *To err is human: Building a safer health system*. Washington, DC: National Academies Press.

Institute of Medicine (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.

Institute of Medicine. (2003). *Health professions education: A bridge to quality.* Washington, DC: National Academies Press.

Institute of Medicine. (2004). *Keeping patients safe: Transforming the work environment of nurses*. Washington, DC: National Academies Press.

Institute of Medicine. (2005). *Building a better delivery system: A new engineering/health care partnership.* Washington, DC: National Academies Press.

Institute of Medicine. (2008). *Retooling for an aging America: Building the healthcare workforce*. Washington, DC: National Academies Press.

Institute of Medicine. (2009). *Redesigning continuing education in the health professions*. Washington, DC: National Academies Press.

Institute of Medicine. (2010). *Robert Wood Johnson Foundation initiative on the future of nursing, at the Institute of Medicine.* Retrieved on February 16, 2010, from http://www.iom.edu/Activities/Workforce/Nursing.aspx

Interprofessional Professionalism Collaborative. (2008). *Interprofessional professionalism: What's all the fuss? [PowerPoint slides]*. Presented at the American Physical Therapy Meeting on February 7, 2008, in Nashville, TN.

Klein, J. (1990). *Interdisciplinarity, history, theory and practice*. Detroit, MI: Wayne State University Press.

Kozier, B., & Erb, G. (2007). *Fundamentals of nursing: Concepts, process, and practice*. Upper Saddle River, NJ: Prentice Hall.

LaPorte, T. R. (1988). The United States air traffic system: Increasing reliability in the midst of rapid growth. In R. Mayntz & T.P. Hughes (Eds.), *The Development of large technical systems* (pp. 215-244). Boulder: Westview Press.

Malloch, K., & Porter O'Grady, T. (2009). *The Quantum Leader: Applications for the New World of Wor*k (2nd ed.). Sudbury, MA: Jones & Bartlett.

Marx, D. (2001) *Patient safety and the "just culture:" A primer for health care executives*. New York, NY: Columbia University.

Maurer, F., & Smith, C. M. (2004). *Community/public health nursing.* St. Louis, MO: Elsevier.

May, K. M., Phillips, L. R., Ferketich, S. L., & Verran, J. A. (2003). Public health nursing: The generalist in a specialized environment. *Public Health Nursing, 20*(4), 252-259.

McCormick, K., Delaney, C., Brennan, P., Effken, J., Kendrick, K., Murphy, J. et al. (2007). Guideposts of the future – An agenda for nursing informatics. *Journal of American Medical Informatics Association, 14*, 19-24.

McDaniel, A., & Delaney, C. (2007). Training scientists in the nursing informatics research agenda. *Nursing Outlook, 55*(2), 115-116.

Melnyk, B. M., & Fineout-Overholt, E. (2005). *Evidence-based practice in nursing and healthcare: A guide to best practice.* Philadelphia: Lippincott Williams & Wilkins.

Mitchell, P. H., Belza, B., Schaad, D. C., Robins, L. S., Gianola, F. J., Odegaard, P. S. et al. (2006). Working across the boundaries of health professions disciplines in education, research, and service: The University of Washington experience. *Academic Medicine*, *81*(10), 891-896.

National Institutes of Health. (2002-2006). *Strategic research plan and budget to reduce and ultimately eliminate health disparities, Vol. 1, fiscal years 2002-2006.* Retrieved August 3, 2010, from http://ncmhd.nih.gov/our_programs/strategic/pubs/VolumeI_031003EDrev.pdf

National Institutes of Health. (2009). *Family history and improving health [PDF document]*. Retrieved from panel statement: http://consensus.nih.gov/2009/familyhistorystatement.htm

National Priorities Partnership. (2008). *National priorities and goals: Aligning our efforts to transform america's healthcare*. Washington, DC: National Quality Forum.

National Research Council. (2005). *Advancing the nation's health needs: NIH research training programs*. Washington. DC: National Academies Press.

Nelson, E., Batalden, P., & Godfrey, M. (2007). *Quality by design: a clinical microsystems approach.* San Francisco: Jossey Bass.

Nelson, E. C., Godfrey, M. M., Batalden, P. B., Berry, S. A., Bothe, A. E., McKinley, K.E. et al. (2008). Clinical microsystems, Part 1. The building blocks of health systems. *The Joint Commission Journal on Quality and Patient Safety, 34*(7), 367-378.

O'Connell, M. B., Korner, E. J., Rickles, N. M., & Sias, J. J. (2007). Cultural competence in health care and its implications for pharmacy Part 1 Overview of key concepts in multicultural health care. *Pharmacotherapy, 27*(7), 1062-1079.

O'Daniel, M, & Rosenstein, A. (2008). Professional communication and team collaboration. In R.G. Hughes (Ed.), *Patient safety and quality: An evidence-based handbook for nurses.* Rockville, MD: Agency for Healthcare Research and Quality.

Parse, R. R., Barrett, E., Bourgeois, M., Dee, V., Egan, E., Germain, C. et al. (2000). Nursing theory-guided practice: A definition. *Nursing Science Quarterly*, *13*, 177.

Payler, J., Meyer, E., & Humphris, D. (2008). Pedagogy for interdisciplinary education—what do we know and how can we evaluate it? *Health and Social Care*, *7*(2), 64-78.

Prows, C. A., & Prows, D. R. (2004). Medication selection by genotype: how genetics is changing drug prescribing and efficacy. *American Journal of Nursing, 104*(5), 60-71.

Porter-O'Grady, T., & Malloch, K. (2007). *Quantum leadership: A resource for health care innovation, 2nd ed*. Sudbury, MA: Jones & Bartlett.

Porter-O'Grady, T., & Malloch, K. (2009). *Innovation leadership: Creating the landscape of health care*. Sudbury, MA: Jones & Bartlett.

Powers, B.A., Knapp, T.R. (1990). *A dictionary of nursing theory and research*. Newbury Park, CA: Sage Publications.

Purnell, L. D., & Paulanka, B. J. (2008). *Transcultural health care: A culturally competent approach, 3rd ed.* Philadelphia: F.A. Davis.

Quality and Safety Education for Nurses. (2010). Graduate competency KSAs. Retrieved May 28, 2010, from http://www.qsen.org/ksas_graduate.php#informatics.

Quam, L., Smith, D., & Yach, D. (2006). Rising to the global challenge of the chronic disease epidemic. *Lancet*, *368*, 1221-1223.

Reason, J. (2000). Human error: models and management. *BMJ, 320*, 768-770.

Ring, J., Nyquist, J., Mitchell, S., (2009). Curriculum for culturally responsive care: the step-by-step guide for cultural competence training. Oxford: Radcliffe Publishing

Rindfleisch, T. (1997). *Privacy, information technology and healthcare.* New York: ACM Press.

Robert Wood Johnson Foundation. (2009). Glossary of health care quality terms. Retrieved June 30, 2009, from http://www.rwjf.org/qualityequality/glossary.jsp

Roberts, K. H. (1990). Managing high reliability organizations. *California Management Review*, *32*, 101-113.

Schim, S. M., Benkert, R., Bell, S. E., Walker, D. S., & Danforth, C.A. (2006). Social justice: Added metaparadigm concept for urban health nursing. *Public Health Nursing*, *24*(1), 73-80.

Sobo, E., Bowman, C., & Gifford, A. (2008). Behind the scenes in health care improvement: The complex structures and emergent strategies of implementation science. *Social Science and Medicine*, *67*(10), 1530-1540.

Suby, C. (2009). Indirect care: The measure of how we support our staff. *Creative Nursing, 15*(2), 98-103. DOI: 10.1891/1078-4535.15.2.98.

Spenceley, S. M., Reutter, L., & Allen, M. N. (2006). The road less traveled: Nursing advocacy at the policy level. *Policy, Politics, & Nursing Practice, 7*(3), 180-194.

Stanley, J.M. (2008). AACN Shaping a Future Vision for Nursing. In B.A. Moyer & R.A. Wittman-Price (Eds.), *Nursing Education: Foundations for Practice Excellence. (pp. 299-310).* Philadelphia: F.A. Davis.

Starfield, B., Hyde, J., Gervas, J., & Heath, I. (2008). The concept of prevention: A good idea gone astray? *Journal of Epidemiology and Community Health*, *62*, 580–583.

United States Department of Health and Human Services. (2000). *Healthy people 2010*. McLean, VA: International Medical Publishing.

U.S. Department of Health and Human Services. (2000b). Plain language: A promising strategy for clearly communicating health information and improving health literacy. Retrieved August 18, 2008, from http://www.health.gov/communication/literacy/plainlanguage/PlainLanguage.htm

U.S. Department of Health and Human Services. (2006). *Healthy people 2010 midcourse Review.* Retrieved December 8, 2009, from http://www.healthypeople.gov/Data/midcourse/pdf/ExecutiveSummary.pdf.

University of North Carolina at Charlotte. (2009). Organizational science. Retrieved July 8, 2009, from http://orgscience.uncc.edu.

Upenieks, V.V., Akhavan, J., Kotlerman, J., Esser, J., & Ngo, M.J. (2007). Value-added care: A new way of assessing staffing ratios and workload variability. *Journal of Nursing Administration, 37*(5), 243-252.

van Achterberg, T., Schoonhoven, L., & Grol, R. (2008). Nursing implementation science: How evidence-based nursing requires evidence-based implementation, *Journal of Nursing Scholarship*, *40*(4), 302-310.

Viney, M., & Rivers, N. (2007). Frontline managers lead an innovative improvement model. *Nursing Management, 38,* 10.

Warner, J. R. (2003). A phenomenological approach to political competence: Stories of nurse activities. *Policy, Politics, & Nursing Practice, 4*(2), 135-143.

Weick K. E., & Sutcliffe, K. M. (2001). *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. San Francisco, CA: Jossey-Bass.

World Health Organization. (2008). 2008-2013 Action plan for the global strategy for the prevention and control of noncommunicable diseases. Retrieved December 8, 2009, from http://www.who.int/nmh/Actionplan-PC-NCD-2008.pdf.

World Health Organization. (2010). Vertical-horizontal synergy of the health workforce. *Bulletin of the World Health Organization, 83,* 4.

Xiaoyan, B., & Jezewski, M. A. (2006). Developing a mid-range theory of patient advocacy through concept analysis. *Journal of Advanced Nursing, 57*(1), 101-110.

APPENDIX A

Task Force on *The Essentials of Master's Education in Nursing*

Joanne Warner, PhD, RN, *Chair*
Dean, University of Portland
School of Nursing

Lynn Babington, PhD, RN
CCNE liaison
Northeastern University
School of Nursing

Jean Bartels, PhD, RN
Vice President for Academic Affairs
and Provost
Georgia Southern University

Joyce Batcheller, DNP, RN, NEA-BC, FAAN, *practice representative*
Senior Vice President/System Chief Nursing Officer
Seton Family of Hospitals

James Harris, DSN, RN, MBA, FAAN, APRN-BC, *practice representative*
Deputy Chief Nursing Officer
Department of Veterans Affairs

Patricia Martin, PhD, RN, FAAN
Dean, Wright State University
College of Nursing and Health

David Reyes, MN, MPH, RN, *public health practice liaison*
Health Services Administrator
Public Health – Seattle & King County

Julie Sebastian, PhD, RN, FAAN
AACN Board liaison
Dean, University of Missouri-Saint Louis
College of Nursing

Geraldine (Polly) Bednash, PhD, RN, FAAN, *staff liaison*
Chief Executive Officer, Executive Director

Kathy McGuinn, MSN, RN, CPHQ, *staff liaison*
Director of Special Projects

Joan Stanley, PhD, RN, FAAN, *staff liaison*
Senior Director of Education Policy

Horacio Oliveira, *staff liaison*
Education Policy and Special Projects Coordinator

APPENDIX B

Participants who attended Stakeholder Meetings (N=18)

Carol J. Bickford
American Nurses Association
Senior Policy Fellow
Silver Spring, MD

Sandra Bruce
National Nursing Staff Development Organization
Nurse Education Program Manager
Pensacola, FL

Evelyn Calvillo
AACN Cultural Competency Advisory Group
Professor and Associate Director
California State University, Los Angeles
Los Angeles, CA

Michelle Cravetz
Association of State and Territorial Directors of Nursing
Executive Director
Clifton Park, NY

Marjorie Godfrey
Dartmouth Institute for Health Policy and Clinical Practice
Instructor
Hanover, NH

Hollye Harrington Jacobs
End-of-Life Nursing Education Consortium
Project Director
Washington, DC

Mary Enzman Hines
American Holistic Nurses Association
President Elect
Flagstaff, AZ

Jean Jenkins
National Human Genome Research Institute
Senior Clinical Advisor to the Director, National Institutes of Health
Bethesda, MD

Rebecca Jones
Council on Graduate Education for Administration in Nursing
Chancellor & Professor, West Suburban College
E. Lombard, IL

Jean Matthews
Quad Council of Public Health Nursing Organizations
Public Health Program Specialist/Nurse Manager
Wheat Ridge, CO

Deborah M. Nadzam
Practice Leader, Patient Safety Services
Joint Commission Resources, Inc.
Oak Brook, IL

Carmen Paniagua & Kem Louie
National Coalition of Ethnic and Minority Nurses Association
Little Rock, AR

Cecilia Plaza
American Association of Colleges of Pharmacy
Director of Academic Affairs and Assessment
Alexandria, VA

Mary-Anne Ponti
American Organization of Nurse Executives (AONE)
Board Member
Washington, DC

Nancy Specter
National Council of State Boards of Nursing
Director of Education
Chicago, IL

Kathy Stephens Williams
American Association of Critical Care Nurses
Past Board Member
Aliso Viejo, CA

APPENDIX C

Schools of Nursing that Participated in the Regional Meetings or Provided Feedback (N=282)

Allen College
Waterloo, IA

Alverno College
Milwaukee, WI

Anderson University
Anderson, IN

Angelo State University
San Angelo, TX

Arkansas State University
State University, AR

Auburn University
Auburn, AL

Augustana College
Sioux Falls, SD

Aurora University
Aurora, IL

Azusa Pacific University
Azusa, CA

Ball State University
Muncie, IN

Bellarmine University
Louisville, KY

Bellevue University
Omaha, NE

Bellin College
Green Bay, WI

Benedictine University
Lisle, IL

Binghamton University
Binghamton, NY

Blessing-Rieman College of Nursing
Quincy, IL

Boise State University
Boise, ID

Brenau University
Gainesville, GA

Brigham Young University
Provo, UT

California Baptist University
Riverside, CA

California State University-Dominguez Hills
San Rafael, CA

California State University-Fullerton
Fullerton, CA

California State University-Long Beach
Long Beach, CA

California State University-Los Angeles
Los Angeles, CA

California State University-San Marcos
San Marcos, CA

California State University-Stanislaus
Turlock, CA

California University of Pennsylvania
California, PA

Carlow University
Pittsburgh, PA

Case Western Reserve University
Cleveland, OH

Cedarville University
Cedarville, OH

Central Methodist University
Fayette, MO

Chamberlain College of Nursing
Columbus, OH

Chatham University
Pittsburgh, PA

Clayton State University
Huntertown, IN

Clemson University
Clemson, SC

College of Mount Saint Joseph
Cincinnati, OH

College of Notre Dame of Maryland
Baltimore, MD

College of Staten Island
Staten Island, NY

Columbus State University
Columbus, GA

Creighton University
Omaha, NE

Curry College
Milton, MA

Delaware State University
Dover, DE

DePaul University
Chicago, IL

DeSales University
Center Valley, PA

Drexel University
Philadelphia, PA

Duke University
Durham, NC

D'Youville College
Buffalo, NY

East Tennessee State University
Johnson City, TN

Eastern Mennonite University
Harrisonburg, VA

Eastern Michigan University
Ypsilanti, MI

Eastern University
St. Davids, PA

Edgewood College
Madison, WI

Elmhurst College
Elmhurst, IL

Elms College
Chicopee, MA

Emory University
Atlanta, GA

Excelsior College
Albany, NY

Felician College
Lodi, NJ

Ferris State University
Big Rapids, MI

Florida A&M University
Tallahassee, FL

Florida Atlantic University
Boca Raton, FL

Florida Gulf Coast University
Fort Myers, FL

Florida International University
Miami, FL

Florida State University
Tallahassee, FL

Framingham State College
Framingham, MA

George Mason University
Fairfax , VA

Georgetown University
Washington, DC

Georgia Southern University
Statesboro, GA

Goshen College
Goshen, IN

Governors State University
University Park, IL

Grand Canyon University
Phoenix, AZ

Grand Valley State University
Grand Rapids, MI

Grand View University
Des Moines, IA

Hawaii Pacific University
Kaneohe, HI

Holy Family University
Philadelphia, PA

Hunter College of CUNY
New York, NY

Idaho State University
Pocatello, ID

Immaculata University
Immaculata, PA

Indiana University of Pennsylvania
Indiana, PA

Indiana University-Purdue University (Fort Wayne)
Fort Wayne, IN

Indiana University-Purdue University (Indianapolis)
Indianapolis, IN

Indiana Wesleyan University
Marion, IN

InterAmerican College
National City, CA

James Madison University
Harrisonburg, VA

Jefferson College of Health Sciences
Roanoke, VA

Johns Hopkins University
Baltimore, MD

Kennesaw State University
Kennesaw, GA

Kent State University
Kent, OH

Keuka College
Keuka Park, NY

Loma Linda University
Loma Linda, CA

Lourdes College
Sylvania, OH

Loyola University Chicago
Chicago, IL

Loyola University New Orleans
New Orleans, LA

Lynchburg College
Lynchburg, VA

Madonna University
Livonia, MI

Marquette University
Milwaukee, WI

Marymount University
Arlington, VA

McKendree University
Lebanon, IL

McNeese State University
Lake Charles, LA

MGH Institute of Health Professions
Boston, MA

Michigan State University
East Lansing, MI

Millikin University
Bloomington, IL

Minnesota State University Moorhead
Moorhead, MN

Misericordia University
Dallas, PA

Monmouth University
West Long Branch, NJ

Moravian College
Bethlehem, PA

Mount Carmel College of Nursing
Columbus, OH

Mount St Mary's College
Los Angeles, CA

Muskingum University
New Concord, OH

National University
La Jolla, CA

Nazareth College
Rochester, NY

Nebraska Methodist College
Omaha, NE

Nebraska Wesleyan University
Lincoln, NE

Neumann College,
Aston, PA

New York University
New York, NY

North Dakota State University
Fargo, ND

North Park University
Chicago, IL

Northern Arizona University
Flagstaff, AZ

Northern Illinois University
DeKalb, IL

Northern Kentucky University
Highland Heights, KY

Northern Michigan University
Marquette, MI

Northwest Nazarene University
Nampa, ID

Northwestern State University of Louisiana
Shreveport, LA

Norwich University
Northfield, VT

Nova Southeastern University
Fort Lauderdale, FL

Oakland University
Rochester, MI

Ohio University
Athens, OH

Old Dominion University
Norfolk, VA

Olivet Nazarene University
Bourbonnais, IL

Otterbein College
Westerville, OH

Pace University
New York, NY

Palm Beach Atlantic University
West Palm Beach, FL

Patty Hanks Shelton School of Nursing
Abilene, TX

Pennsylvania State University
University Park, PA

Prairie View A & M University
Houston, TX

Purdue University
West Lafayette, IN

Quinnipiac University
Hamden, CT

Research College of Nursing
Kansas City, MO

Rivier College
Nashua, NH

Robert Morris University
Moon Township, PA

Rush University Medical Center
Chicago, IL

Saginaw Valley State University
University Center, MI

Saint Ambrose University
Davenport, IA

Saint Anthony College of Nursing
Rockford, IL

Saint Cloud State University
St. Cloud, MN

Saint Joseph's College- New York
Brooklyn, NY

Saint Joseph's College of Maine
Standish, ME

Saint Louis University
St. Louis, MO

Saint Xavier University
Chicago, IL

Salem State College
Salem, MA

Salisbury University
Salisbury, MD

Samford University
Birmingham, AL

Samuel Merritt University
Oakland, CA

San Diego State University
San Diego, CA

San Francisco State University
San Francisco, CA

Seattle University
Seattle, WA

Shenandoah University
Winchester, VA

Simmons College
Boston, MA

South Dakota State University
Sioux Falls, SD

Southern Illinois University
Edwardsville
Edwardsville, IL

Southern University and A&M College
Baton Rouge, LA

Spring Hill College
Mobile, AL

Stevenson University
Stevenson, MD

SUNY Downstate Medical Center
Brooklyn, NY

SUNY Institute of Technology at
Utica/Rome
Utica, NY

SUNY Upstate Medical University
Syracuse, NY

Temple University
Philadelphia, PA

Texas A&M University-Corpus Christi
Corpus Christi, TX

Texas Christian University
Fort Worth, TX

Texas Tech University Health Sciences
Center
Lubbock, TX

Texas Woman's University
Denton, TX

The Catholic University of America
Washington, DC

The College of New Jersey
Ewing, NJ

The George Washington University
Washington, DC

The Ohio State University
Columbus, OH

The Sage Colleges
Albany, NY

The University of Alabama
Tuscaloosa, AL

The University of Alabama in Huntsville
Huntsville, AL

The University of Louisiana at Lafayette
Lafayette, LA

Thomas Jefferson University
Philadelphia, PA

Touro University
Henderson, NV

Towson University
Towson, MD

University at Buffalo
Buffalo, NY

University of Alaska Anchorage
Anchorage, AK

University of Arizona
Tucson, AZ

University of California-Davis
Davis, CA

University of California-San Francisco
San Francisco, CA

University of Central Arkansas
Conway, AR

University of Central Florida
Orlando, FL

University of Cincinnati
Cincinnati, OH

University of Colorado Denver
Denver, CO

University of Connecticut
Storrs, CT

University of Florida
Gainesville, FL

University of Hartford
West Hartford, CT

University of Hawaii at Manoa
Honolulu, HI

University of Houston-Victoria
Victoria, TX

University of Illinois at Chicago
Chicago, IL

University of Iowa
Iowa City, IA

University of Kansas
Kansas City, KS

University of Mary
Bismarck, ND

University of Maryland
Baltimore, MD

University of Massachusetts-Lowell
Lowell, MA

University of Michigan
Ann Arbor, MI

University of Medicine & Dentistry of New Jersey
Newark, NJ

University of Mississippi Medical Center
Jackson, MS

University of Missouri-Columbia
Columbia, MO

University of Missouri-Kansas City
Kansas City, MO

University of Missouri-Saint Louis
St Louis, MO

University of Nebraska
Lincoln, NE

University of Nevada-Las Vegas
Las Vegas, NV

University of Nevada-Reno
Reno, NV

University of New Hampshire
Durham, NH

University of New Mexico
Albuquerque, NM

University of North Alabama
Florence, AL

University of North Carolina-Greensboro
Greensboro, NC

University of North Dakota
Grand Forks, ND

University of Northern Colorado
Greeley, CO

University of Pennsylvania
Philadelphia, PA

University of Phoenix
Phoenix, AZ

University of Pittsburgh
Pittsburg, PA

University of Portland
Portland, OR

University of Rhode Island
Kingston, RI

University of Rochester
Rochester, NY

University of Saint Francis- Illinois
Joliet, IL

University of Saint Francis- Indiana
Fort Wayne, IN

University of San Diego
San Diego, CA

University of San Francisco
San Francisco, CA

University of South Alabama
Mobile, AL

University of South Carolina
Columbia, SC

University of South Florida
Tampa, FL

University of Southern Indiana
Evansville, IN

University of Southern Maine
Portland, ME

University of Tennessee Health Science Center
Memphis, TN

University of Texas Health Science Center-Houston
Houston, TX

University of Texas Health Science Center-San Antonio
San Antonio, TX

University of Texas-Arlington
Arlington, TX

University of Texas-Austin
Austin, TX

University of Texas-Brownsville
Brownsville, TX

University of Texas-Pan American
Edinburg, TX

University of Texas-Tyler
Tyler, TX

University of the Incarnate Word
San Antonio, TX

University of Toledo
Toledo, OH

University of Virginia
Charlottesville, VA

University of Washington
Seattle, WA

University of West Georgia
Carrollton, GA

University of Wisconsin-Milwaukee
Milwaukee, WI

University of Wisconsin-Oshkosh
Oshkosh, WI

University of Wyoming
Laramie, WY

Ursuline College
Pepper Pike, OH

Valdosta State University
Valdosta, GA

Villanova University
Villanova, PA

Virginia Commonwealth University
Richmond, VA

Viterbo University
LaCrosse, WI

Walden University
Minneapolis, MN

Washburn University
Topeka, KS

Washington State University
Spokane, WA

Washington State University
Vancouver, WA

Washington State University
Spokane, WA

Waynesburg University
Waynesburg, PA

Weber State University
Ogden, UT

Webster University
St. Louis, MO

Wesley College
Dover, DE

West Chester University
West Chester, PA

West Coast University
Costa Mesa, CA

West Suburban College of Nursing
Oak Park, IL

West Texas A&M University
Canyon, TX

West Virginia University
Morgantown, WV

Western Carolina University
Cullowhe, NC

Western Governors University
Salt Lake City, UT

Western Kentucky University
Bowling Green, KY

Western University of Health Sciences
Pomona, CA

Wichita State University
Wichita, KS

Widener University
Chester, PA

Wilkes University
Wilkes-Barre, PA

William Carey University
Hattiesburg, MS

William Paterson University
Wayne, NJ

Wilmington University
New Castle, DE

Winona State University
Winona, MN

Winston-Salem State University
Winston-Salem, NC

Wright State University
Dayton, OH

Yale University
New Haven, CT

York College of Pennsylvania
York, PA

APPENDIX D

Professional Organizations that Participated in the Regional Meetings or Provided Feedback (N=9)

American Academy of Nurse Practitioners National Certification Program
Austin, TX

American Association for the History of Nursing
Wheat Ridge, CO

American Nurses Association
Silver Spring, MD

American Organization of Nurse Executives
Washington, DC

Genetic Health Care Expert Panel of the American Academy of Nursing
Washington, DC

International Society of Nurses in Genetics
Pittsburgh, PA

Louisiana State Board of Nursing
Baton Rouge, LA

National Cancer Institute
Bethesda, MD

National Institutes of Health
Bethesda, MD

APPENDIX E

Healthcare Systems that Participated in the Regional Meetings (N=3)

PinnacleHealth
Harrisburg, PA

Elmhurst Memorial Hospital
Elmhurst, IL

Portland VA Medical Center
Portland, OR