

Certification and Credentialing to Define Competency-Based Practice

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Original Articles

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One of the challenges that healthcare organizations face today is how to effectively establish, document, and evaluate competency in intravenous practice. The process used to define practice parameters based on national certification and credentialing versus organizational policies is described. Key attributes, the role of mentoring, and adverse outcomes are addressed.

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Nurse credentialing traces its routes to the American Association of Nurse Anesthetists and the American College of Nurse Midwives; both of these specialty groups offered certification examinations to ensure competency in the clinical arena. ¹ Other nursing specialty groups formed independent certification corporations charged with the responsibility of assessing, validating, and documenting the clinical eligibility and continued clinical competency of nursing practices in a specific area.

Whether to seek credentials in a specialty practice is a choice that professionals make for themselves. Many nursing colleagues already have made that choice. The number of credentialed intravenous nursing specialists continues to grow.

Applicants for the prestigious CRNI of the Year award have articulated the following statements regarding the value of specialty certification: "The ability to network nationally with other CRNIs has

enhanced my practice within the community. My professional affiliation has served as a catalyst to my homecare staff by increasing their awareness and enthusiasm to also become certified. My certification has made me a legitimate resource for the staff on the importance of continuing professional growth and development. Certification enables me to believe in myself, that I am highly specialized. Certification is the benchmark for advanced practice in infusion therapy.”

Another applicant said, “The knowledge gained through the certification process and continued learning through regular attendance at INS offerings has provided me with a key resource. CRNI leadership has elevated the professional image of the intravenous nurse specialist in both our clinical and business communities.”

CREDENTIALING HOW ... AND BY WHOM?

The terminology itself is sometimes unclear. The word “certified” has been used rather loosely to describe a level of education obtained through institutional courses or continuing education programs.

Hospitals and healthcare agencies nationwide historically have conducted in-house certification for staff members. This level of certification is exactly what it states; in-house certification indicates that the professional has met standards for practice consistent with that institution’s policies and procedures. During the author’s tenure as IV team director at both community hospitals and homecare agencies, she developed the curriculum for in-house IV educational programs and certified nursing staff consistent with those principles. The hospital-based program provided a basic entry level of IV education to nurses working throughout the hospital, and in a 500-bed institution in which staff nurses were responsible for maintaining access and administration set changes, provided a level of confidence, at least to IV team staff, that hospital guidelines were being followed.

Did this credentialing program generate certified nurses beyond the walls of the institution or agency? No. Instead, the program provided a basic level of IV education, reflective of organizational policies, to all members of the nursing staff. What is the difference between institutional certification and national certification and credentialing?

Institutional certification may use staff IV facilitators, nurse educators, and IV resource teams to oversee the activities of fellow nursing staff. All nurses responsible for maintaining, initiating, or monitoring IV therapy are required to participate in a continuing education program, be supervised by IV nurse specialists, and are then certified for practice within that particular institution. Is that certification transferable? No. Is the credential recognized beyond that facility? No. However, the author has found that other institutions are eager to employ nurses that have completed the in-house certification program.

NATIONAL CERTIFICATION AND CREDENTIALING VERSUS ORGANIZATIONAL POLICIES

National certification embodies successful completion of specific examination content areas, understanding of the Core Curriculum for Intravenous Nursing, and adherence to practice standards in a defined clinical area. It involves a study of evidence-based nursing practice and application of experiential knowledge. Evidence-based nursing ensures that one’s practice is based on the best available evidence and facilitates one’s ability to put evidence into practice. The literature indicates that future preferred methodologies of educational and clinical learning would most likely occur in the

experiential learning arena, linking the classroom with the community. Cantor ² has identified the major factors to increase interest in experiential learning (Table 1).

TABLE 1

Experiential Learning

- Develop a strong relationship between classroom learning and the realities of our global community
- Understand learning theory, and cognitive, social and emotional development
- Broaden the teaching styles used by faculty to more effectively relate to the multiple learning styles of the older, nontraditional student
- Acknowledge that knowledge base and career skill needs are changing so rapidly in our society that it is increasingly important to educate students on how to be self-learners
- Increase importance to the overall reputation of an academic program or institution to forge a stronger link between academic programs and practice settings

Adapted from Cantor J: Experiential learning in higher education: linking classroom and community. ASHE-ERIC Higher Education Reports 7:1, 1995.

Certification is defined as a voluntary commitment to achieving and maintaining the highest level of practice in the specialty of IV therapy. Certification evaluates knowledge, skills, and abilities and documents core competencies in the clinical areas to ensure positive outcomes. ⁴

The credential, CRNI, is the designation earned by the nursing professional who successfully completes the examination administered by the Intravenous Nurses Certification Corporation (INCC). This specialty certification helps to ensure the validity and competency of nurses working in the practice setting of IV therapy (Table 2).

TABLE 2

Intravenous Nurses Certification Corporation

- INCC assesses, validates, and documents the clinical eligibility and continued clinical competency of nurses delivering IV therapy in all practice settings
- Validates reliability of credentialing mechanisms and their relationship to clinical practice
- Promotes recognition of credentialed nurses to the public, other healthcare organizations, and to the nursing profession

The Registered Nurse (RN) Examination Council develops the test item pool and the certification examination, which is administered twice annually. The Council maintains a test item pool of sufficient size to meet the demands of future tests and ensures that the items properly cover the nine content areas and meet the accepted skill levels. Eligibility criteria and recertification requirements are defined in [Table 3](#).

TABLE 3

INCC Eligibility Criteria

Eligibility criteria

- Current RN license in United States or Canada
- Minimum 1600 hours of experience within the last 2 consecutive years prior to the date of application

Recertification by

- Continuing education
- Examination

The credential is awarded for a period of 3 years. During that time, a CRNI has the opportunity to obtain recertification units that fulfill the requirements to recertify for an additional 3 years; CRNIs also may choose to take the examination again to recertify.

The INCC Board of Directors recently revised the methodology for obtaining recertification units to include participation in an Item Writers' Workshop, attendance of INS Local Chapter educational

programs, teaching clinical IV educational programs, completing continuing education credits offered in the *Journal of Intravenous Nursing*, publishing an article in the *Journal*, and speaking at an INS National Meeting (Table 4).

TABLE 4	
Revised Recertification Opportunities	
Education Program	Recertification Units
INS National Meetings	30 (minimum)
<ul style="list-style-type: none"> ● Annual Meeting and Industrial Exhibition ● National Academy of Intravenous Therapy ● Other programs approved by INCC for recertification units 	
Item Writers Workshops	10 (maximum)
INS Local Chapter educational programs (accredited by the state nursing regulatory agency for continuing education)	5 (maximum)
Teaching clinical IV educational programs (accredited by the state nursing regulatory agency for continuing education)	5 (maximum)
Continuing Education credits in <i>Journal of Intravenous Nursing</i>	10 (maximum)
Publication in <i>Journal of Intravenous Nursing</i>	10 (maximum)
Speaking at INS National Meetings	6 (maximum)

The INCC was created to develop and administer a credentialing program that meets judicial, regulatory, and professional testing standards. Although specialty nursing certification is voluntary, programs must exist for public protection and cannot violate antitrust legislation by restraining trade or restricting competition. Eligibility criteria for participants in credentialing programs cannot be overly restrictive. Certification examinations must be flexible and open to innovation, as evidenced by empirical data, and they must reflect the skills and knowledge of the content area being assessed.

The benefits of certification are many. Registered nurses who become CRNIs demonstrate their commitment to their practice, improve their skills and knowledge about the specialty, enhance their professional image as IV therapy nurses, and provide better patient care.

National certification ensures competency. National nursing certification ensures that the public is provided with competent practitioners by validating the competency of practicing nurses.⁶

COMPETENCY

Competency is defined as the demonstration of knowledge and skills in meeting professional role expectations.⁷ Competency is not only knowing, but also knowing that you know.

The *Intravenous Nursing Standards of Practice* were developed as a framework for developing IV policies and procedures in all practice settings and defining performance criteria for nurses responsible for administering IV therapy. The *Standards* define the criteria relative to nursing accountability in the delivery of IV therapies. They provide a framework for nurses to evaluate patient outcomes and provide a tool for evaluating the quality of patient care and the competency of the nurse delivering IV therapy.⁶

The IV nurse specialist, through study, supervised practice, and validation of competency, has acquired knowledge and developed skills necessary for the practice of IV nursing. Such a nurse is competent to practice.

COMPETENCY-BASED ORIENTATION

Competency-based orientation programs designed to provide outcome-focused orientation for the IV nurse who is new to an institution or agency benefit that institution or agency and the patient.⁸ Such a program must be standardized but individualized, quality-based but cost-effective.⁹

Orientation or institutional competencies are derived from accrediting organization standards, such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and specialty nursing organization standards of practice. JCAHO requires documentation of competence at both orientation and on an ongoing basis. State health departments also require documentation of clinical competence. Competency programs include such tools as self-assessment, orientation curriculum, skills checklist, and in-house education, including simulated practice, written and didactic examination, and program evaluation. Adult learning principles, as described by Knowles, are an integral component of the program.^{10,11} Knowles advocates competency-based learning modules with defined objectives for knowledge and skills acquisition combined with formal instruction, self-directed study, and mentoring in the clinical environment.¹⁰

MENTORING

The term mentor comes from the story of Mentor in the *The Odyssey*. Mentor guided Odysseus' son Telemachus in his search to find his father and in the process aided Telemachus in achieving adulthood and confirming his identity in the world. During a 10-year period, Mentor served as advisor, guardian, role model, and counselor for his apprentice, student, and disciple.¹² In recent years, mentoring has become a topic widely explored by practitioners within organizations and by researchers from a variety of disciplines. This surge in mentoring interest is in part attributable to the recent growth of areas such as learning organizations and organizational change management, which created the need for additional development and training of employees and strengthening of business systems. Mentoring has become a primary vehicle for developing employees on the job, thus addressing a host of change management, organizational learning, and employee training issues.¹³

Current mentoring research indicates that the quality of a mentoring relationship may be related to the mentor's ability to know about and respond to the diverse and changing needs of each protégé. The nurse as a mentor is not a new concept. Nurses have historically mentored students, new graduates, and other staff members. Intravenous nurses have assumed responsibility for developing other members of the team. For the mentor, the relationship serves as a generative experience, in which he/she can give back, and in doing so, achieve a positive and satisfying image of his/her overall life and impact on others. In addition to the significance of mentorship to the professional development of both mentors and protégés, mentoring consistently has been found to be related to positive occupational and performance outcomes for protégés, mentors, and organizations.¹⁴ The literature suggests that the mentor has the capacity to use his/her experience and influence to provide certain functions for the protégé, such as advocacy, advisement, emotional support, career counseling, sponsorship or showcasing of the protégé's abilities, access to professional networks, empathy, teaching of skills and knowledge, protection, coaching, and friendship. However, playing a single role cannot constitute mentoring. Shea posits that mentorship involves "responding to the critical needs in the life of another in ways that prepare them to make better decisions or achieve more in the future."¹³ The role of the professional, credentialed IV nurse specialist in mentoring others has resulted in typical mentoring outcomes ([Table 5](#)).

TABLE 5

Mentoring Outcomes

- Professional development of employees
- Greater job satisfaction
- More effective and efficient socialization into an organization
- Increased work commitment
- Better performance
- Higher rates of productivity

ROLE DEFINITION AND DELINEATION

Various levels of knowledge and expertise exist within the specialty practice of IV therapy. The continuum of expertise extends from the generalist nurse who is new to the specialty practice to the IV nurse specialist who is qualified to practice in an expanded role. A nurse's level of functioning within the specialty is based on education, experience, and technical-clinical expertise. A nurse practicing IV therapy must meet the competencies and educational requirements set forth in the *Standards of Practice*.⁶

An IV nurse specialist practices IV therapy with autonomy and accountability in all practice settings, including high-tech home IV settings, independent practice, subacute care, and free-standing IV therapy centers. A nurse is responsible for recognizing individual qualifications and maintaining education and expertise in nursing practice within the scope of these qualifications. The IV nurse must meet the eligibility criteria for initial certification within the specialty practice of IV nursing.⁶

Only at that time will the nurse be awarded the credential that ensures excellence in IV nursing practice, advancing the specialty practice of IV therapy and IV nursing.

KEY ATTRIBUTES

Clinically competent staff members provide health status improvements. Bulger stated, "The concept of personal development and enhancing one's own personal competencies may be more fully developed in the nursing literature than in medicine—excluding, perhaps, the psychiatric literature."¹⁵

Key attributes are competence, a necessary precursor for both autonomy and empowerment; autonomy, the freedom to act on what you know, requiring competence as its basis; and empowerment, the ability to delegate and enable others to act. Taylor states, "Moral competence should be added as a fourth nursing competency to the traditional triad of intellectual, interpersonal, and technical skills."¹⁶

THE AMERICAN NURSES CREDENTIALING CENTER: NURSING CREDENTIALING RESEARCH COALITION

The concept of certification encompasses the idea that nurses increasingly are developing multiple areas of expertise. To reflect this idea, the Nursing Credentialing Research Coalition (NCRC) created a modular approach to certification that enables the nurse to be recognized for multiple areas of expertise, in addition to competence in a core clinical specialty ¹⁷ (Table 6).

TABLE 6

The Focus of the Nursing Credentialing Research Coalition

To actively conduct research on the impact, role, and benefits of credentialing on nursing specialty practice.

- Provide centralized data bank with information about certified nurses
- Validate the inference that certified nurses affect outcomes
- Examine the productivity/cost-benefit of certified nurses
- Utilize available job analysis data to enhance relevance of data collection
- Provide resources to individual coalition members, including market research and data on prevailing practices/trends
- Develop a common set of demographic data on certified nurses
- Investigate effect of certification on practice outcomes
- Examine costs and benefits of certification
- Provide market research
- Demonstrate the solidarity of the profession during a time of encroachment by allied workers
- Reduce the cost to individual organizations and/or increase the number of areas that could be researched
- Draw upon a variety of expertise in directing the research
- Provide outcome-based research needed by credentialing organizations to validate the value of credentialing to nurse, consumer, employer, and regulatory agencies

Many nursing colleagues have taken advantage of the opportunity to obtain multiple certifications. It is not unusual for a nurse to use the acronyms CRNI, CCRN after her/his name, indicating certification in both IV nursing and critical care.

To ensure that credentialing remains a first-rate approach to quality assurance, in 1998 the American Nurses Credentialing Center convened a group of professionals to address quality assurance through credentialing. The issue of the impact of technology on practice was addressed; nowhere is this more evident than in our practice. Intravenous therapy changes rapidly, and the committed professional takes advantage of every educational opportunity to ensure continuing competence. The NCRC will document the percent of staff who hold national certification and the extent to which this mark of competence is reflected in clinical ladder criteria, salary, and institutional marketing.

MAGNET HOSPITAL STATUS AS AN INDICATOR OF QUALITY

The label “magnet hospital” originally was given to a group of US hospitals that were able to successfully recruit and retain professional nurses during a national nursing shortage in the early 1980s. Studies of these facilities illuminated the leadership characteristics and professional practice attributes of nurses within these organizations. Recent investigations within magnet hospitals document significant relationships between nursing and patient outcomes, including mortality and patient satisfaction.¹⁸

Numerous authors have researched and published on the subject of patient outcomes. In one study of nursing’s impact on patient outcomes, Prescott¹⁹ stated that creating and maintaining a competitive edge will be increasingly important to hospitals operating in the competitive environment envisioned as central to healthcare reform. Registered nurses are one of the hospital’s most important resources for achieving and maintaining a competitive advantage because they contribute in important ways to cost savings and delivering high quality care. Even in today’s healthcare environment, in which the paradigm has shifted to mergers, acquisitions, and integrated health systems, Prescott’s hypothesis is valid.¹⁹

Most research on patient outcomes has focused on physician practices or processes of care. Although physician behavior clearly is an important factor in patient outcomes, this singular focus ignores the interdisciplinary nature of healthcare in hospitals. Scott et al²⁰ wrote, “One of the principal features of any system is that its performance is determined as much by the arrangement of its parts—their relations and interactions—as by the performance of the individual components. A number of highly-qualified physicians do not necessarily add up to a high-quality medical staff.” Multiple physicians, nurses, social workers, physical therapists, and many other allied health professionals contribute to patient outcomes in ways largely unknown. Despite the relative lack of attention to the process of care of nurses and others, the literature on nurses’ impact on hospital mortality rates is considerable.

In addition to nursing’s effect on mortality, nurses also affect other important measures, such as length of stay and cost of care. Brooten et al²¹ demonstrated the effects of nurse specialist care on outcomes of low–birth-weight infants. Neonates cared for by the nurse specialist were discharged on average 11.2 days earlier than were neonates in a control group, at a cost savings of approximately \$18,500 per family.

A common theme heard throughout magnet hospitals is the importance of leadership of the chief nurse as an executive who supports professional practice and continued competency of staff. The chief nurse is attentive to the cultural and ethnic diversity of patients and their significant others, as well as care providers. The chief nurse in the magnet hospitals exemplifies a strong management

philosophy and adherence to standards for improving the quality of patient care. Designation of magnet programs previously was limited to the acute care setting, but recently for the first time a long-term care facility was recognized for nursing excellence.²²

ADVERSE EVENTS

Despite recommendations that more positive indicators of nursing care quality be used, adverse occurrences continue to be the most often reported indicator. The adverse occurrences reported in the nursing literature include patient falls, medication administration errors, pressure ulcers, nosocomial infections, patient complaints, and high mortality rates. Change in mortality accomplished through organizational processes was reported as long ago as 1855. Florence Nightingale showed significant reduction in mortality among wounded soldiers at Scutari by organizing their care around principles of hygiene and the use of trained nurses.²³

Oral and IV medication administration errors have been used as indicators of the quality of nursing care in several studies, although not in relation to specific staffing levels. Specific categories of errors were omissions, wrong method, wrong patient, wrong dose, inappropriate continuation, wrong drug, administrations to patients with allergies, and adverse drug reactions.²⁴

Adverse events may be traced to negligence or deviations from standards. To qualify as an adverse event, the event must prolong hospital stay, cause disability at the time of discharge, or both. The literature implies that what a nurse actually does plays a key role in health outcomes and patient satisfaction. The major nursing outcome measures or nursing-sensitive outcome classifications have been identified as mortality, adverse events and satisfaction, and actual health status change. The following nursing-sensitive outcome classifications are particularly relevant to acute care settings: infection status, nutritional status via food and fluid intake, oral health, pain control, self-esteem/perception of self-worth (especially in relation to ostomies), thermoregulation, tissue integrity, sleep, and symptom control/alleviation.²⁴ Mortality is a global measure of care. Nursing care has been one of the many variables correlated with mortality changes in a number of important studies.

In a study by Hartz et al,²⁵ when hospitals were ranked on the ratio of registered nurses to all nurses, hospitals in the upper fourth had a mean patient mortality of 113.1, and those in the lower fourth had a rate of 199.4. However, registered nurses were not the only providers whose presence affected mortality; both a higher percentage of physicians who were board-certified specialists and a higher percentage of registered nurses were associated with a significantly lower mortality rate. Mitchell and Shortell²³ found that technological availability was significantly associated with lower risk-adjusted mortality and that diagnostic diversity was associated with greater risk-adjusted mortality. Shortell also was able to demonstrate that not only did the types and numbers of physicians and nurses affect mortality but interdisciplinary collaboration also has an effect.²³

Brennan et al²⁶ distinguished between what may be labeled as naturally occurring adverse events and adverse events that can be traced to negligence or deviations from standards. Ceria²⁷ reported greater compliance with policies for monitoring IV therapy for low-absence nursing units than for high-absence units. Some events are naturally occurring adverse events, and such events may be traced to negligence or deviations from standards. Again, the impact of standards of practice on outcomes is clear. *The Intravenous Nursing Standards of Practice* reflect excellence and should be used routinely to develop institutional policies and procedures.

OUTCOMES MANAGEMENT RESOURCES

Modern technology has provided a plethora of Internet resources. Consequently, many exceptional resources exist related to outcomes management. Such sources can facilitate research related to

the implementation of outcomes management programs. Outcomes management Internet resources are shown in [Table 7](#).²⁸

TABLE 7

Outcomes Management Internet Resources

Agency for Healthcare Policy and Research (AHCPR)

www.ahcpr.org

American Society for Quality (ASQ)

www.asq.org

Association for Health Services Research (AHSR)

www.ahsr.org

Best Practices Network

www.best4health.org

Foundation for Accountability (FACCT)

www.facct.org

Institute for Healthcare Quality (IHQ)

www.ihq.com

National Association for Healthcare Quality (NAHQ)

www.nahq.org

Certification is a voluntary process. A key component in nurses' preparation for the workplace of the future is certification. Historically, certification has focused on demonstrated knowledge, skills, and abilities in defined areas of specialization in the professional field. Specialty certification is expanding and is expected to grow in the next few years.

In the future, all states will include certification as eligibility for licensure as an advanced practice nurse. The competitive nature of managed care dictates that certification at the basic (registered nurse) level may be mandated as a value-added way of promoting quality of care. Care delivered by the credentialed IV nursing specialist will be a valuable commodity.

Automaker Henry Ford once said that asking the question, "Who ought to be the boss?" is like asking, "Who ought to be the tenor in the choir?" Obviously, the man who can sing tenor.²⁹ To the question, "Who should practice IV therapy?" one's immediate response should be, "The credentialed IV nursing specialist, of course."

Another candidate for CRNI of the year put it this way: “Credentialing has helped me broaden my base of knowledge, and, as I share this knowledge I hope to make a difference in someone’s life. IV therapy will be a major player in the new medical arena, and as a CRNI, I believe that I hold an important key for making it happen.”

The choice is clear for countless thousands of IV nursing specialists and for those who have not yet taken the step: certification is indeed the key to defining and maintaining competency-based practice.

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