

Quality Indicators For Nursing Doctoral Degrees



AACN Position Statement

Updated November 2001

Indicators of Quality in Research-Focused Doctoral Programs in Nursing

Position Statement: Schools of nursing must consider the indicators of quality in evaluating their ability to mount research-focused doctoral programs. High quality programs require a large number of increasingly scarce resources and a critical mass of faculty and students. The Indicators of Quality in Research-Focused Doctoral Programs in Nursing represent those indicators that should be present in a research-focused program.

There is considerable consensus within the discipline that while there are differences in the purpose and curricula of PhD and DNS programs, most programs emphasize preparation for research. Therefore, AACN recommends continuing with a single set of quality indicators for research-focused doctoral programs in nursing whether the program leads to a PhD or a DNS degree.

Research-focused doctoral programs prepare students to pursue intellectual inquiry and conduct independent research for the purpose of extending knowledge. In the academic community, the PhD, or Doctor of Philosophy degree, is the most commonly offered research-focused degree. However, some schools for a variety of reasons may award a Doctor of Nursing Science (DNS or DNSc) as the research-focused doctoral degree. Individuals educated in research-focused doctoral programs are traditionally prepared to pursue careers in research and teaching. Graduates of these programs also are prepared to pursue careers in the fields of nursing and health care administration and policy. The purposes of the research-focused doctoral degree are to prepare for a lifetime of intellectual inquiry, creative scholarship, and research; provide preparation that leads to careers in government, business, and industry as well as academia; and result in extension of knowledge (CGS, 1977).

Professional doctoral programs are relatively new in nursing. The distinguishing factor of these programs is the emphasis on research application. Graduates of the professional degree program are prepared to function in advanced practice roles, as well as administrative, executive, public policy, and teaching roles.

The Nursing Doctorate (ND) degree prepares individuals for practice and is not a research-focused degree.

Indicators of Quality in Research-Focused Doctoral Programs in Nursing

Faculty

- I. Represent and value a diversity of backgrounds and intellectual perspectives.
- II. Meet the requirements of the parent institution for graduate research and doctoral education; substantial proportion of faculty hold earned doctorates in nursing.
- III. Conceptualize and implement productive programs of research and scholarship that:
 - A. Are developed over time and build upon previous work;
 - B. Are at the cutting edge of the field of inquiry;
 - C. Are congruent with research priorities within nursing and its constituent communities;
 - D. Include a substantial proportion of extramural funding; and
 - E. Attract and engage students.
- IV. Outcome indicators of productive programs of research and scholarship include:

- A. Extramural grant awards in support of research or scholarship;
- B. Peer-reviewed publications of research, theory, or philosophical essays;
- C. Presentations of research, theory, or philosophical essays;
- D. Scientific review activities such as with NIH study sections and other grant application review groups;
- E. Editorial review activities;
- F. State, regional, national, or international recognition as a scholar in an identified area; and
- G. Evidence of influence on science policy throughout the field.

V. Create an environment in which mentoring, socialization of students, and the existence of a community of scholars is evident.

VI. Assist students to understand the value of programs of research and scholarship that continue over time and build upon previous work.

VII. Identify, generate, and utilize resources within the university and broader community to support program goals.

VIII. Devote a significant proportion of time to dissertation advisement; generally each faculty member should serve as the major adviser/chair for no more than 3-5 students during the dissertation phase.

Programs of Study

The emphasis of the program of study is consistent with the mission of the parent institution, the discipline of nursing, and the degree awarded. The faculty's areas of expertise and scholarship determine specific foci in the program of study. Requirements and their sequence for progression in the program are clear and available to students in writing. Common elements of the program of study are outlined below.

I. Core and related course content - the distribution between nursing and supporting content is consistent with the mission and goals of the program, and the student's area of focus and course work is included in:

- A. Historical and philosophical foundations to the development of nursing knowledge;
- B. Existing and evolving substantive nursing knowledge;
- C. Methods and processes of theory/knowledge development;
- D. Research methods and scholarship appropriate to inquiry; and
- E. Development related to roles in academic, research, practice, or policy environments.

II. Elements for formal and informal teaching and learning focus on:

- A. Analytical and leadership strategies for dealing with social, ethical, cultural, economic, and political issues related to nursing, health care, and research;
- B. Progressive and guided student scholarship research experiences, including exposure to faculty's interdisciplinary research programs;
- C. Immersion experiences that foster the student's development as a nursing leader, scholarly practitioner, educator, and/or nurse scientist; and
- D. Socialization opportunities for scholarly development in roles that complement students' career goals.

III. Outcome indicators for the programs of study include:

- A. Advancement to candidacy requires faculty's satisfactory evaluation (e.g., comprehensive exam) of the student's basic knowledge of elements I-A through I-E identified above;
- B. Dissertations represent original contributions to the scholarship of the field;
- C. Systematic evaluation of graduate outcomes is conducted at regular intervals;
- D. Within 3-5 years post-completion, graduates have designed and secured funding for a research study OR within 2 years post-completion, graduates have utilized the research process to address an issue of importance to the discipline of nursing or health care within their employment setting;
- E. Employers report satisfaction with graduates' leadership and scholarship at regular intervals post-completion; and
- F. Graduates' scholarship and leadership are recognized through awards, honors, or external funding at 3-5 years post-completion.

Resources

I. Sufficient human, financial, and institutional resources are available to accomplish the goals of the unit for doctoral education and faculty research.

- A. The parent institution exhibits the following characteristics:

- 1) Research is an explicit component of the mission of the parent institution;
- 2) An office of research administration;
- 3) A record of peer reviewed external funding;
- 4) Post-doctoral programs;
- 5) Internal research funds;
- 6) Mechanisms that value, support, and reward faculty and student scholarship and role preparation; and
- 7) A university environment that fosters interdisciplinary research and collaboration.

B. The nursing doctoral program exhibits the following characteristics:

- 1) Research active faculty as well as other faculty experts to mentor students in other role preparations.
- 2) Technical support for:
 - (a) Peer review of proposals and manuscripts in their development phases;
 - (b) Research design expertise;
 - (c) Data management and analysis support;
 - (d) Hardware and software availability; and
 - (e) Expertise in grant proposal development and management.
- 3) Space sufficient for:
 - (a) Faculty research needs;
 - (b) Doctoral student study, meeting, and socializing;
 - (c) Seminars; and
 - (d) Small group work.

C. Schools of exceptional quality also have:

- 1) Centers of research excellence;
- 2) Endowed professorships;
- 3) Mechanisms for financial support to allow full-time study; and
- 4) Master teachers capable of preparing graduates for faculty roles.

II. State-of-the-art technical and support services are available and accessible to faculty, students, and staff for state of the science information acquisition, communication, and management.

III. Library and database resources are sufficient to support the scholarly endeavors of faculty and students.

Students

I. Students are selected from a pool of highly qualified and motivated applicants who represent diverse populations.

II. Students' research goals and objectives are congruent with faculty research expertise and scholarship and institutional resources.

III. Students are successful in obtaining financial support through competitive intramural and extramural academic and research awards.

IV. Students commit a significant portion of their time to the program and complete the program in a timely fashion.

V. Students establish a pattern of productive scholarship, collaborating with researchers in nursing and other disciplines in scientific endeavors that result in the presentation and publication of scholarly work that continues after graduation.

Evaluation

The evaluation plan:

I. Is systematic, ongoing, comprehensive, and focuses on the university's and program's specific mission and goals;

II. Includes both process and outcome data related to these indicators of quality in research-focused doctoral programs;

III. Adheres to established ethical and process standards for formal program evaluation, e.g., confidentiality and rigorous quantitative and qualitative analyses;

- IV. Involves students and graduates in evaluation activities;
- V. Includes data from a variety of internal and external constituencies;
- VI. Provides for comparison of program processes and outcomes to the standards of its parent graduate school/university and selected peer groups within nursing;
- VII. Includes ongoing feedback to program faculty, administrators, and external constituents to promote program improvement;
- VIII. Provides comprehensive data in order to determine patterns and trends and recommend future directions at regular intervals; and
- IX. Is supported with adequate human, financial, and institutional resources.

Background

In order to meet its social responsibility to enhance the health of people through the discovery and dissemination of knowledge, the American Association of Colleges of Nursing (AACN) has established indicators of quality for research-focused doctoral programs in nursing. Despite steady growth in the number of doctoral programs, graduations have remained relatively flat. At the same time the profession faces a serious future shortage of nursing faculty and an increased demand for doctorally prepared nurses for administrative and clinical positions. Therefore, nursing must explore a range of options for increasing the number of doctoral graduates.

AACN first developed a set of indicators for quality doctoral education in 1986. A revised set of indicators was approved by the membership in 1993. In 1999, in order to remain current and in response to concerns over an impending shortage of doctorally prepared faculty, a rapid growth in the number and types of doctoral programs in nursing, and concern regarding resources available to support the increased number of programs, the AACN Board of Directors appointed a task force to revise the quality indicators for doctoral programs and address differences among PhD, DNSc/DNS/DSN (hereafter referred to as DNS), and ND degrees.

To address the charge, the task force gathered input from a number of sources. First, 1999 AACN Doctoral Conference participants, in small discussion groups, provided feedback on the relevance and appropriateness of the current indicators and made suggestions for revision. Participants expressed general satisfaction with the 1993 indicators but sought greater specificity, greater emphasis on outcomes to be achieved, and recognition of all types of doctoral programs.

The nursing and higher education literature and consultants in higher education provided a second source of input for the work of the task force. Consultants included Marilyn Baker of the National Research Council, National Academy of Sciences, and Marsha Landolt, representing The Pew Charitable Trusts' *Re-envisioning the PhD* project. Third, in November 1999 the task force conducted surveys of all nursing schools with doctoral programs or proposed doctoral programs and a convenience sample of non-academic settings employing doctorally prepared nurses. Fourth, a representative of the task force participated in the Pew *Re-envisioning the PhD* project working conference (April 2000) and the Third Biennial International Conference on Professional Doctorates (September 2000). Finally, a forum was conducted at the Fall 2000 AACN Semi-annual Meeting (October 2000) to review the draft indicators.

The Research Versus the Professional Degree

Despite the fact that American graduate education is a model for other nations, there has been a growing concern, in both the academic and practice arenas that PhD programs may have become too focused on scholarly research to the neglect of all other faculty responsibilities and non-academic careers. This concern led to the Pew Foundation sponsored project, *Re-envisioning the PhD*, designed to rethink the design of doctoral education to address the shortage of academic positions in most fields and the fact that PhD graduates are often viewed as ill-prepared for jobs outside of academe (Nyquist, 1999). Among the major problems uncovered through the project, some affect nursing doctoral programs: program completion rates, relevance of preparation for careers other than in academia, lack of diversity in the student body, and requirements for completing the degree. A number of other significant problems encountered by other disciplines do not affect nursing: over-production of PhDs, long periods of post-doctoral training, a scarcity of academic positions for graduates, and overuse of doctoral students to teach undergraduate courses. A major emphasis of the conference was the need to diversify the career paths beyond the traditional research role for which students are prepared, especially for teaching and positions outside of academe.

Examination of the flaws in PhD education has taken a somewhat different path in Europe and Australia. There the model of PhD education is a research-only program with little or no course work and an apprenticeship relationship between the student and the major advisor. The emphasis is on developing disciplinary knowledge and not on its application or on the role the student will fill upon graduation. Education, business, and a number of other professional fields have identified needs for knowledge development that is more directly applicable to the problems encountered in

the day-to-day practice of the profession.

A growing number of European and Australian fields are responding to perceived gaps in PhD education by developing professional doctorates. Unlike the PhD programs, these programs include substantial course work, and dissertation research is driven largely by problems encountered in the practice world. Students are primarily seasoned professionals who seek the doctorate to gain skills needed to solve problems in the work world or for career advancement within a bureaucracy.

Distinctions between research and professional doctoral degrees have been a subject of continuing debate within U.S. higher education circles as well. In 1966, the Council of Graduate Schools (CGS) endorsed the position that "the professional doctor's degree should be the highest university award given in a particular field in recognition of completion of academic preparation for professional practice, whereas the PhD should be given in recognition of preparation for research whether the particular field of learning is pure or applied (CGS, 1966, p.3)." Later the CGS (1977) proposed that the purposes of the PhD are to prepare for a lifetime of intellectual inquiry, creative scholarship, and research; provide preparation that leads to careers in government, business, and industry as well as academia; and result in extension of knowledge.

Nursing Doctoral Education

Historically, the growth of PhD education in the U.S. paralleled the growth of professional organizations that exerted pressure for licensure and standards. This led to university-based education for professionals and sowed the seeds for professional doctorates such as the EdD, DPH, DNS, and others (Downs, 1989).

In nursing, the bias has been toward research-oriented preparation. Stevenson and Woods (1986) summarized the development of doctoral education in nursing as including four generations of research-oriented doctorates:

- 1900-1940 EdD or other functional degree
- 1940-1960 PhD in basic or social science with no nursing content
- 1960-1970 PhD in basic science with minor in nursing
- 1970-present PhD in nursing or DNS

The literature contains numerous references to the high degree of similarity between PhD and DNS degrees in nursing. Grace (1989) observed that the structure and content of nursing doctoral programs, particularly the PhD and DNS, became very similar in the 1970s and 1980s with a common core of research, theory, and integrative science.

Downs (1989) was able to detect some subtle differences between the two types of programs, concluding that the DNS programs had more clinical content, and the PhD programs included more statistics and research-focused content. However, Downs also completed an informal review of Nursing Research topics by PhD and DNS authors and found essentially the same number of manuscripts on clinical topics by both types of authors.

Since 1970, most new programs have led to PhD degrees in nursing. Many of the DNS programs have been converted to PhD programs as programs have evolved and gained acceptance in academic circles. New DNS and ND programs also have opened so that the proportion of PhD and DNS programs launched has remained relatively constant across the decades (see Table 1a and Table 1b).

Table 1a. Trends in Nursing Doctoral Programs Started by Type and Decade

| Decade beginning: | Program Totals | Degree Offered | | | |
|-------------------|----------------|----------------|-----|--------------|----|
| | | EdD | PhD | DNS/DNSc/DSN | ND |
| 1930 | 2 | 1 | 1 | 0 | 0 |
| 1940 | 0 | 0 | 0 | 0 | 0 |
| 1950 | 1 | 0 | 1 | 0 | 0 |
| 1960 | 3 | 0 | 1 | 2 | 0 |
| 1970 | 20 | 0 | 14 | 3 | 3 |
| 1980 | 30 | 0 | 25 | 5 | 0 |
| 1990 | 26 | 0 | 22 | 3 | 1 |

Table 1b. Total Number of Nursing Doctoral Programs in 1999-2000 Academic Year

| Academic Year | Program Total * | Degree Offered | | | |
|---------------|-----------------|----------------|-----|--------------|----|
| | | EdD | PhD | DNS/DNSc/DSN | ND |

| | | | | | |
|-----------|----|---|----|------|---|
| 1999-2000 | 78 | 1 | 64 | 9 ** | 4 |
|-----------|----|---|----|------|---|

* Indicates number of doctoral programs and not schools; several schools have had more than one program.

** The total number of DNS programs is less than the sum of programs since a number of schools have closed their DNS programs (Source: AACN, 2000a&b).

Current Situation

Recent literature does not address the differences or similarities between the purposes, content, or quality indicators of the PhD and DNS degrees awarded in nursing. Despite earlier recommendations from leaders in nursing and higher education that differentiated the two types of degrees, few differences have evolved. Both the PhD and DNS degree programs, in almost all instances, are research-focused doctoral programs. The content and course requirements may vary slightly and the emphasis may be on empirical versus applied research, but the focus of the program is to prepare students to pursue intellectual inquiry and conduct independent research for the purpose of extending knowledge.

In a 1999 AACN survey of schools of nursing offering PhD and DNS programs, of the 58 (74%) respondents, only one school offered both PhD and DNS degree programs. This school indicated that there were not separate faculties for the two programs but did require different course work, and an internship was required for the DNS program. In other responding schools the DNS degree was being phased out as the PhD program was approved and offered. Still other institutions offering the DNS degree would offer the PhD if possible. Some schools had long-standing DNS programs and included a strong emphasis on research training.

In order to gather information on the current and potential use and roles of doctorally prepared nurses in the health care delivery system, task force members conducted interviews with a convenience sample of nurse executives from non-academic health care delivery organizations. From these interviews, a fairly consistent picture emerged. The number of doctorally prepared nurses per institution was small (0-4) and these individuals were most frequently employed in managerial, evaluation, or educational roles with relatively few in clinical positions. However, several respondents noted a desire to employ additional doctorally prepared nurses, particularly for clinical and research positions. No respondents foresaw the doctoral degree as a requirement for any organizational positions in the near future.

Despite the addition of 52 doctoral nursing programs in the 1980s and 1990s, there were just 200 more graduates in 1998 than in 1989, and most of that growth occurred prior to 1992. In 1998 the average number of graduations from the 70 existing doctoral programs was less than 6 per program. This slow rate of growth in graduates portends a serious shortage of doctorally prepared faculty. Berlin and Sechrist (1999) provided evidence that the current nursing faculty workforce is aging rapidly and more than a third (38.1%) of doctorally prepared nurses work in settings other than schools of nursing. The median age of graduates of doctoral programs in nursing was 45.7 years with 6.5 % of graduates age 55 or older.

The rapid growth of nursing doctoral programs throughout the 1980s and 1990s created concern for some nursing leaders that the number of doctoral programs may have exceeded the faculty and research funding resources available to support quality programs. In 1997, Hinshaw and Berlin analyzed AACN, National Institutes of Health (NIH), and library databases and conducted a survey of school of nursing research offices to identify the characteristics of excellent doctoral programs. Using the AACN quality indicators (AACN, 1993) and the National Institute of Nursing Research (NINR) definition of a research-intensive environment, they identified a number of variables that correlated with being a ranked school in the *U.S. News and World Report* rankings of schools of nursing. These variables included the proportion of doctorally prepared graduate faculty, the number of NIH grants and publications, the presence of a general research office and centers of excellence, the number of students, the proportion of full-time students, and the duration of the doctoral program. Not correlated with receiving a high ranking were the proportion of tenured and doctorally prepared faculty, and Carnegie classification of the institution. In a multivariate analysis, only the number of publications and the duration of the program were selected as important predictors of rankings (Hinshaw & Berlin, 1997).

APPENDIX A

AACN Task Force to Revise Quality Indicators for Doctoral Education

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APPENDIX B

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