

The Nursing Faculty Shortage:

A Crisis For Health Care

Karl D. Yordy, M.P.A.
Spring 2006



Robert Wood Johnson Foundation

This research was supported by a grant from the Robert Wood Johnson Foundation to the Association of Academic Health Centers (AAHC).

The full research paper is available on the AAHC Web site as part of the Factors Affecting the Health Workforce compendium:

www.ahcnet.org/pdf/factors_affecting_the_health_workforce_2005.pdf

The shortage of nursing faculty in the United States is a critical problem that directly affects the nation's nurse shortage, which is projected to worsen in future years. Short-term interventions to address the nursing shortage are inadequate given the increasing needs of a growing and aging population. A substantial increase in newly educated nurses will be needed to meet future demand; therefore, timely and sustainable interventions to reduce the nursing faculty shortage are required. This paper highlights solutions to the faculty shortage by:

- describing the current faculty shortage in relation to demand, supply, educational preparation and productivity;
- examining the factors that contribute to the faculty shortage;
- reviewing the array of interventions already undertaken; and
- outlining recommendations for further action.

The paper is based on a review of published literature and data, including surveys by government and professional organizations, studies by state task forces addressing the nursing shortage, foundation reports, and reviews by such groups as the National Conference of State Legislatures of activities at the state level, as well as author interviews with leaders in nursing education.

A substantial increase in newly educated nurses will be needed to meet projected future demand. Consequently, increased supply will require a major expansion of nursing faculty and other educational resources. The following four elements determine the adequacy of faculty to meet future needs: **demand, supply, educational preparation** and **productivity**.

Demand

Demand for newly educated nurses influences demand for faculty. Federal agencies have projected a significant increase in new nursing positions based on the growth and aging of the population and their associated health care needs, coupled with continual development of medical technology and practice that are heavily dependent on nurses. The Bureau of Labor Statistics projects a 27 percent increase in nursing jobs by 2012 from 2002, the largest increase for any occupation, and the Health Resources and Services Administration (HRSA) has projected a similarly large increase in demand for nurses, from about 2 million full-time equivalents in 2000 to about 2.8 million in 2020.

Meeting the projected demand for new nurses in 2020 will require a significant increase in nursing graduates, perhaps by as much as 50 percent, to fill new nursing positions as well as to account for attrition from an aging workforce. This corresponds to an increase in the demand for nursing faculty. Furthermore, if hospitals continue seeking nurses with Bachelor of Science degrees (BSN) for advanced practice, demand for faculty may increase further because the gross ratios of faculty to students in BSN programs are higher than for other forms of entry-level training.^{1,2}

Supply

Substantial evidence at both the national and state levels shows that the current inadequate supply of nursing faculty constrains the level of enrollment in nursing programs necessary to meet future demand of nurses. For instance, a national survey indicates that 33,000 qualified applications to nursing programs were turned down, and 76.1 percent of the surveyed schools indicated that shortage of faculty was the main factor limiting admissions.³ State surveys reveal similar findings. Increases in graduates from advanced educational programs that are the principal source of new faculty lag behind overall increases in nursing enrollments, with 405 doctoral graduates in 2004, an increase of only eight graduates from 2003.

In addition, adequacy of future faculty supply will be strongly influenced by the high average age of nursing faculty, which is linked to the age at which nurses complete academic training for the faculty role, especially at the doctorate level. The mean age at the award of the doctorate was about 46 in 2000.⁴ In 2001 the American Association of Colleges of Nursing (AACN) found that the mean and median age of doctorate-prepared faculty was about 53; for masters-prepared faculty, the mean and median age was about 49. Not only do nurses typically enter the faculty role relatively late in their careers, but they retire at a relatively young age, 62.5 on average.

Retirement of faculty is projected to peak in 2010, just when the demand for newly trained nurses is at its highest.⁵

Educational Preparation of Faculty

To educate nurses for an increasingly complex health care environment, many leaders in nursing education have called for raising the standards for faculty academic credentials to the doctorate level. Therefore, strategies for increasing the supply of nursing faculty should also aim to enhance rigor in academic preparation.

A relatively small proportion of nursing schools provide research-oriented doctoral training: about 17 percent (93 schools) of the member schools of the American Association of Colleges of Nursing and less than 7 percent of all 1,376 U.S. nursing schools that provide basic education for RNs.^{6,7} The number of students in these doctoral programs is also relatively small, with 1,603 full-time and 1,836 part-time students, and only 412 graduates in 2004, an average of about 4.5 per doctoral program. Although the number of graduates by school is not available, it is likely that these graduates are not evenly distributed among all 93 programs, meaning that some programs probably have one or two (or even fewer) graduates per year. The total number of doctoral graduates is about 0.5 percent of all graduates of nursing programs preparing RNs, and not all of these doctoral graduates end up in faculty positions.

Despite the need for highly qualified faculty, enforcing higher academic standards makes increasing supply even more challenging. The process for preparing new faculty is already lengthy. Furthermore, higher academic standards may also discourage some from pursuing a faculty career.

Productivity

Enhancing faculty productivity to accommodate higher levels of enrollment in nursing programs should complement efforts to increase faculty supply. A significant measure of faculty productivity is the ratio of faculty to students or graduates. Associate degree programs produce more graduates and more RNs per faculty member than do BSN programs.^{8,9} Some interventions—such as incentives given to faculty in Texas to work overtime—try to address this crude measure by attempting to lower the faculty-to-student ratio.¹⁰

Many academic institutions use other measures of productivity—such as scholarly publications, professional presentations and grant support—to determine tenure and promotion. One recent survey used these measures to assess scholarly productivity among nursing faculty. Most respondents indicated little, if any, scholarly productivity. For example, more than 60 percent had not published in peer reviewed journals or applied for a federal/national grant in the last five years, and almost 60 percent had not presented at a national professional meeting in the same time period.¹¹ Nursing schools have attempted to enhance productivity through use of technology, including distance learning, and by sharing faculty resources within a university or among nursing schools.

CAUSES OF THE FACULTY SHORTAGE

Although convincing evidence substantiates the acute shortage of qualified nursing faculty, reasons for the shortage are less clear. Those most often cited in published studies and analyses and in interviews with nursing leaders are described below.

Lack of Interest in Nursing Faculty Careers

Nurses must be motivated to seek a faculty career. Nursing students may instead pursue growing opportunities both within and outside the health field. As academic standards for nursing faculty increase—with master’s level training viewed as the minimum requirement and doctoral training being considered the new standard—pursuing an academic career may seem even more difficult for many nurses. As a countervailing trend, however, the increase of basic nurse training at the baccalaureate level and the growth of programs that provide nursing education to those with bachelor’s degrees in other fields is creating a richer pool for recruitment of future faculty.

Long Periods of Clinical Practice Delay Entry into Faculty Profession

Some nurse leaders interviewed noted that the profession tends to encourage lengthy clinical experience prior to pursuing an academic path. The late age of entry into faculty careers offers some empirical evidence for these observations. This culture may have resulted from hospital-based diploma programs that dominated early nursing education, in which nursing students were trained by experienced nurses who often lacked higher educational credentials.

Fluctuating Enrollment in Nursing Programs

Enrollment in nursing programs has fluctuated in the last 30 years. From 1976 through 1983, enrollments in basic RN programs grew gradually, reaching about 250,000 in 1983. Enrollment then fell to about 183,000 in 1987, rising again about 270,000 in 1993 and then falling to about 220,000 in 2002.¹² From 1995 through 2000, candidates taking the NCLEX-RN exam (the national qualifying examination for registered nurses) for the first time fell from 96,438 to 71,392 per year. In recent years, enrollment and graduations have started to rise again, but these fluctuations in enrollment may deter those interested in a nursing faculty career.

Academic Salaries

Academic salaries, especially at public educational institutions that prepare the majority of nurses, are not as competitive as they ought to be. Constrained state and local budgets burdened by reduced federal funds, increasing Medicaid costs, crumbling public infrastructures, and pressures to shore up public school systems all contribute to this problem. Most nursing faculty members could earn substantially

more in clinical practice or administration. During the 2004–2005 academic year, the median salary for assistant professors with doctoral preparation in nursing schools providing baccalaureate and graduate education was \$56,291. For those without doctoral preparation, the median was \$48,240.¹³ Median salaries for associate professors in associate degree nursing programs were \$46,000 in 2002.

The gap between clinical and faculty salaries is likely to grow as hospitals and other health care institutions try to address the nursing shortage by raising salaries for clinically practicing nurses. Substantial salary differentials prompt some faculty members to leave for higher paid positions in practice and administration, and may discourage nurses from considering a faculty career.

High Educational Costs Associated with Faculty Training

The cost of education required for a faculty position is substantial, in terms of tuition, income forgone during education, and salary differentials between clinically practicing nurses and nursing faculty. Some of those pursuing a faculty career handle the financial burden by going to school part time while maintaining an income through clinical practice. This scenario also contributes to the higher average age of new faculty members.

Dissatisfaction with Faculty Career

Dissatisfaction with faculty careers lead many to seek other positions or take early retirement. A survey in 2003 indicates that substantial numbers of faculty are dissatisfied with their salaries as well as heavy workloads. More faculty are dissatisfied with their own institutions specifically than with the nursing faculty role in general.¹⁴

Inadequate Institutional Funding for Additional Faculty Positions

Nursing education leaders interviewed for this paper indicated that even when qualified candidates for faculty positions are identified, inadequate institutional funding inhibits the establishment of additional faculty positions. In some states, policies for funding academic health sciences centers place nursing education at a disadvantage. Growing shortages in other health professions drive competition for limited institutional resources.¹⁵

CURRENT APPROACHES TO REDUCING THE FACULTY SHORTAGE

As part of the larger effort to address the nursing shortage, many initial steps have been taken to curb the faculty shortage:

Stimulate Interest in the Faculty Role

To achieve a sufficient increase in the supply of faculty, efforts must persuade more nurses and nursing students to pursue academic careers, and to do so at an earlier age. These efforts include mentoring that conveys the rewards of a faculty career, producing recruitment materials (e.g. written materials, DVDs) to stimulate interest in faculty careers, and expanding the pool of potential faculty by reaching out to more minorities and men.

Provide Financial Assistance for Education

Financial support can help eliminate or reduce the need to work while pursuing the degree(s) necessary for attaining a faculty position, and therefore help younger candidates enter that career path. Title VIII of the Public Health Service Act supports education for faculty positions by providing grants to nursing education programs for traineeships and loans toward graduate training for faculty careers, coupled with loan forgiveness for time spent in the faculty role. Furthermore, the federal Department of Labor (DOL) is providing support for the training of nursing faculty and mentors. One state has used DOL Workforce Investment Act funds to provide loans for faculty training. Federal research fellowships can also be a component of training for faculty careers. Finally, some health care institutions are providing time off with pay for employees pursuing graduate training.

Combine Clinical Experience with Training in Academic Disciplines

Nursing faculty careers are typically marked by long periods of clinical practice prior to training for a faculty role. However, several programs combine advanced clinical experience with other aspects of academic training, including research. Efforts to integrate clinical experience and training with other aspects of advanced academic education can also allow earlier entry into an active faculty role. Medicaid funds in a number of states support clinical internships. Programs have also been developed to expedite the entry of nurses with clinical training at the master's level into faculty roles by providing them with education in additional aspects of the faculty role. Finally, part-time academic training, sometimes assisted by distance learning programs, while maintaining a clinical role can be used as the basis for integrated training.

Make Academic Training More Accessible

Giving up an existing career to pursue a lengthy education, often in a different location from one's residence, may deter those who would otherwise choose to pursue a faculty career. Distance learning, coupled with short intensive periods at the academic center is one way of eliminating this barrier. Cooperative programs with health care institutions that bring academic training to the clinical site are also being used to improve accessibility of education for academic careers. These programs allow the individual to continue work, reduce disruption to personal and family life and make efficient use of existing faculty resources.

Increase Salary and Other Faculty Support

Reducing the gap between faculty income and income earned in clinical practice can make a faculty career more attractive to those with academic interests and also improve the retention of current faculty who might otherwise leave to pursue practice or administration. In addition to salary increases, other forms of faculty support—such as additional space for research and teaching, sabbaticals, seed money to develop research proposals, and tuition forgiveness for faculty dependents—can help improve retention of faculty. Some states have created special funds to support salary increases in nursing schools and have a provision for tuition forgiveness for dependents of faculty. Furthermore, many universities use internal funds to provide faculty with seed money to develop research proposals.

Obtain Support for More Faculty Positions

Funding for additional faculty positions has helped expand nursing school enrollment in many places. Some states have provided support for additional faculty through new sources of revenue, such as the use of tobacco settlement and lottery funds, and Labor Department funds available under the Workforce Investment Act. Cooperative arrangements with health care institutions have supported additional clinical faculty to increase nursing student enrollments, often with a specific arrangement that additional nursing graduates be committed to a period of employment at the supporting institution. Finally, funding from foundations and other private source has supported new faculty positions.

Support Programs that Improve Productivity of Existing Faculty

Several educational programs are developing and implementing models of nursing education that increase faculty productivity. Making use of scarce faculty resources through cooperative arrangements among nursing education programs is a very promising approach that may include using faculty outside of nursing to teach health policy, health economics, and ethics components of a nursing curriculum. The use of technology, including distance learning, is another promising opportunity to enhance productivity.

Support Research Training

Although a relatively small proportion of nursing faculty are able to achieve full status as researchers, familiarity with research methodologies benefits all faculty by enriching their knowledge base and enhancing their teaching skills. Support of research and research training by the National Institute of Nursing Research, the Agency for Healthcare Research and Quality, the Department of Veterans Affairs, and private foundations has enhanced this component of nursing education and faculty development. Furthermore, universities and their teaching hospitals have collaborated to establish centers that facilitate faculty-led research and the involvement of graduate nursing students in research.

Study Nursing Faculty Needs

Many states have conducted studies of their own nursing shortages. Following the example of North Carolina, which established a state-funded center for nursing in 1991, a network of about 40 state nursing centers now collects information about nursing workforce issues.¹⁶ Many of these state centers' studies provide specific proposals for addressing the faculty shortage, and some have taken legislative action or have used funding from the Labor Department under the authority of the Workforce Investment Act of 1998 toward development of nursing faculty.

RECOMMENDATIONS FOR FURTHER ACTION

The following proposals provide a framework for discussing further action needed to address the nursing faculty shortage. These proposals intend to 1) provide national visibility and prestige for the important role of nursing faculty; 2) support data and analysis that can guide actions to develop and support faculty; 3) emphasize excellence in the training of faculty; and 4) encourage the states' role in supporting nursing faculty.

1. Establish a National Nursing Faculty Center

A national nursing faculty center would serve as a continuous source of data and expertise. The center could be a direct federal activity, probably as a component of the Division of Nursing within the Health Resources and Services Administration. Alternatively, it could be established through federal contract with an academic institution or a non-federal research or health policy center, following the pattern of federally established and supported national laboratories. As another alternative, the center could be supported, at least initially, through foundation support, perhaps augmented by other private funds from the health care sector. Its functions would include: 1) providing technical assistance to states on analysis and planning related to nursing faculty, including development of standards for state data gathering on nursing faculty; 2) conducting a periodic national sample survey of nursing faculty that would complement the federal survey of the nursing workforce and serve as a national point of reference for studies of nursing faculty;¹⁷ 3) serving as a central clearinghouse for information on innovative approaches to faculty development and utilization; 4) conducting and/or supporting studies of nursing faculty and the financing of nursing education; and 5) supporting evaluations of programs to expand and enhance faculty.

2. Create a National Fellowships Program for Faculty Development

A nationally competitive program of fellowships for faculty training would 1) serve as a tool to recruit talented nurses for faculty positions; 2) publicize the need for more nursing faculty within the parent institutions of nursing schools; and 3) facilitate rapid completion of graduate programs by eliminating the need for part-time education while working.

Each fellowship should cover a period of up to five years and require completion of doctoral or equivalent training within that period. In addition to the stipend for the fellow, the award would include a payment to the institution in lieu of tuition. Traineeships could include a provision requiring the fellow to pay back part or all of the stipend if the individual leaves the faculty or other academic employment before a set period of time.

3. Offer Grants to Support Centers of Excellence for Training Faculty

Centers of excellence in graduate education for nurses should be supported through a program of competitive grant support, with a focus on both qualitative and quantitative increases in the training of nursing faculty. A competitive grant program would

provide necessary resources and ensure that expanded enrollment is accompanied by enhanced excellence of academic preparation in the triad of teaching, research and service. It could also have a seeding effect by providing faculty and doctoral education models that could be replicated elsewhere over time. In addition, these institutions could provide faculty and establish cooperative relationships with other institutions training faculty at the master's level.

Recently introduced legislation (The Nurse Faculty Education Act of 2005–S. 1575) has the potential to meet much of this objective, but the proposed level of funding is disproportionate to the need, with each grant limited to \$100,000 for a maximum period of five years for each institution. Also, the proposed legislation seems less focused on academic excellence as the principal criteria for selection.

Further development of the advocated proposal would be necessary to determine a recommended level of support, but a level of \$10 million could provide grants of \$500,000 per year for 20 institutions. The grants should cover a substantial duration, perhaps five to 10 years, with a re-examination of the programs after that time.

4. Extend the Current Federal Program of Loans for Faculty Training

The current federal program under Title VIII directly targets the need for additional faculty. It provides institutions with federal funds for loans to graduate nursing students training for nursing faculty positions, with a provision that forgives up to 85 percent of the amount of the loan after four years of employment as a faculty member. This program is currently funded at a level just under \$5 million a year, which provides loan support for about 491 future faculty. Given the need for faculty, a doubling of the program to the level of \$10 million would be justified.

5. Award Grants to States for Development of Plans to Expand Faculty

Grants should be provided for data collection and analysis and planning activities that support an adequate nursing faculty for states. Grant support would augment state and private support already provided to some of these state-level nursing workforce centers, and could encourage other states and private sources to support analysis and planning focused on nursing faculty issues. These state and regional activities would be complementary to the data and analysis activities of the proposed national nursing faculty center, and could encourage more adequate state and local funding for nursing faculty and education.

Support should be ongoing to assure that the effects on faculty supply can be tracked over time. Federal support would be appropriate for providing this continuity, but foundation support could develop models of state activity that could be used to stimulate further support from federal or other sources. The grant program could have specific requirements for matching support from state and private sources. For smaller states, regional cooperative arrangements through such entities as the Western

Interstate Compact for Higher Education, the Southern Regional Education Board, or their regional equivalents could be supported, or designated regional health workforce centers could be involved.

It is difficult to put a dollar amount on such support without further study, but an initial target of up to \$100,000 annually per state would stimulate attention to this significant issue, with the amount varying according to the size and needs of the state. The matching requirement would augment this support.

6. Establish a Research Agenda on Nursing Faculty and Nursing Education

Better systematic knowledge about nursing education and faculty is needed to guide action by those interested in advancing nursing education. Although the center proposed earlier in this paper would conduct and support studies including those proposed by nursing researchers, filling informational gaps on nursing faculty should not depend exclusively on individual researchers. The center should develop a research plan which sets long term priorities. Several projects that would fill some current knowledge gaps and augment the national sample survey of nursing faculty (proposed as an ongoing function of the national center) include:

Longitudinal study of faculty careers. A longitudinal study of nursing faculty careers would provide better information about why and how nurses pursue academic careers, decisions about academic preparation, how careers develop over time, reasons for leaving the faculty role to pursue other nursing careers or to retire, and decisions to continue part-time involvement in nursing education and scholarship after formal retirement. Such a study would track the education and academic careers of a cohort of nursing faculty over time and could illustrate the trajectory of academic careers in nursing. Results of the study would provide vital information for institutional, individual and policy decisions about nursing faculty that are now based on the experiences and judgments of individuals whose perceptions will vary based on their experiences and personal and institutional biases.

Faculty supply and demand. A study of nursing faculty supply and demand would provide a sound basis for decisions at all levels concerning support for nursing faculty development. Analysis of supply would consider issues such as attrition through retirement and decisions to leave academia for practice or administration. Increases in productivity and the need to advance the academic excellence of faculty should be factored into these projections. The use of faculty from other disciplines and health professions to teach nursing students is also relevant to meeting the faculty shortage and should be considered in the study. This study would draw on the ongoing survey of nursing faculty included as a function of the proposed center on nursing faculty. This study would also complement recommended state-level activities concerned with nursing faculty. It would provide the basis for projections of likely needs for new faculty over time, complementing research on the projections of overall nursing supply and demand performed by several federal agencies and the many state nurse workforce development centers.

Financing of nursing education. A major study on the financing of nursing education is needed to provide context and support for faculty development. The study should cover funding from all sources: federal, state, endowments, foundations, health care institutions, and tuition. A national study independent of professional interests would probably have greater credibility with policy-makers at all levels. Such a study would complement data gathered by institutions and professional groups, and would provide a basis for comparisons of financing among the states.

Evaluation studies. Formal studies that evaluate the effects of various programs and policies to increase nursing faculty should be funded to provide information on changes to programs and policies and to inform funding decisions by all funding sources.

The proposals presented in this paper are intended to stimulate and inform interest in the nurse faculty issue. Lively and informed debate over the significance of the nursing faculty shortage—and possible solutions—is the first step toward action. The challenge is turning that attention into productive policies and support that ensures an adequate supply of nursing faculty—and, ultimately, of nurses—in a time of great demand.

Endnotes

- 1 National League for Nursing. *Nurse Educators, 2002, Report of the Faculty Census Survey of RN and Graduate Programs*. NLN, New York, 2003.
- 2 National League for Nursing. *Nursing Data Review, Academic Year 2003, Vol.1, Contemporary RN Nursing Education*. NLN, New York, 2004.
- 3 Berlin LE, Wilsey SJ and Bednash GD. “2004–2205 Enrollments and Graduations in Baccalaureate and Graduate Programs in Nursing.” Washington: American Association of Colleges of Nursing, 2005.
- 4 Berlin LE and Sechrist KR. “The Shortage of Doctorally Prepared Nursing Faculty: A Dire Situation.” *Nursing Outlook*, pp. 50–56, March–April, 2002.
- 5 Ibid.
- 6 American Association of Colleges of Nursing. “Degree Completion Programs for Registered Nurses: RN to Master’s Degree and RN to Baccalaureate Programs.” AACN fact sheet, February 2005.
- 7 National League for Nursing. *Nursing Data Review, Academic Year 2003, Vol.1, Contemporary RN Nursing Education*. NLN, New York, 2004.
- 8 National League for Nursing. *Nurse Educators, 2002, Report of the Faculty Census Survey of RN and Graduate Programs*. NLN, New York, 2003.
- 9 National League for Nursing. *Nursing Data Review, Academic Year 2003, Vol.1, Contemporary RN Nursing Education*. NLN, New York, 2004.
- 10 Green A, Wieck KL, Willman J, Fowler C, Douglas W, Jordan C. “Addressing the Texas Nursing Shortage: A Legislative Approach to Bolstering the Nursing Education Pipeline.” *Policy, Politics, and Nursing Practice*, pp. 1–8, March 2003.
- 11 National League for Nursing. *Nurse Educators, 2002, Report of the Faculty Census Survey of RN and Graduate Programs*. NLN, New York, 2003.
- 12 National League for Nursing. *Nursing Data Review, Academic Year 2003, Vol.1, Contemporary RN Nursing Education*. NLN, New York, 2004.
- 13 American Association of Colleges of Nursing. “New Data Confirms Shortage of Nursing School Faculty Hinders Efforts to Address the Nation’s Nursing Shortage.” Press Release, Washington, March 8, 2005.
- 14 National League for Nursing. *A National Study of Faculty Role Satisfaction, 2003*. NLN, New York, 2005.
- 15 See the September–October 2002 *Health Affairs* issue 21(5) devoted to health workforce issues.
- 16 Cleary, B, and Rice, R, (eds). *Nursing Workforce Development: Strategic State Initiatives*. New York: Springer Publishing Company, April 2005.
- 17 Health Resources and Services Administration. *The Registered Nurse Population, March 2000, Findings from The National Sample Survey of Registered Nurses*. Washington.



Robert Wood Johnson Foundation

P.O. Box 2316

Route One and College Road East

Princeton, NJ 08543

www.rwjf.org