The Forums Institute for Public Policy

The Nursing Workforce Shortage:

Impacts on Health and Medical Care in New Jersey

Background Information for…

THE NEW JERSEY POLICY FORUM

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Thomas Edison State College
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ISSUE: **Both in New Jersey and nationally, health workforce analysts are reporting on a shortage among nurses. Their forecasts underscore the severity and scope of the shortage which has reached global levels.[1] What kinds of long-term strategies are state-level policymakers using to address the issue, which has implications for various health and medical care programs and policies?**

INTRODUCTION

In its report focusing on the status of the nation's health care workforce in 2010, the Institute for the Future points out that changes in the relative supply of new providers and their emerging roles may alter the health care landscape "more drastically over the next 10 to 15 years than has occurred in the past 30 years." Analysts, forecasters and researchers are cautioning health care policy makers and decision makers that the future for most health professionals needs to be addressed in order to avoid healthcare workforce shortages and potential reductions in both the quality and appropriateness of medical care. Forecasts reported by researchers including those at the Bureau of Labor Statistics and the Health Resources and Services Administration (HRSA) indicate that shortages are expected among many health professionals, including: critical care specialists, pulmonologists, nurses, dentists, pharmacists, home health and personal care aides.[2]

Of all these health care professionals, registered nurses (RNs) represent the largest single group of providers in the U.S. and currently number over 2.2 million. Even with the changes taking place within the health care delivery system during the past decade – including an increased focus on preventive and behavioral aspects of health care and delivery of medical care in outpatient settings – nurses continue to be primarily employed in acute care hospitals, where over two-thirds of nurses work in clinical and administrative positions.

The nursing workforce has been particularly affected by diverse changes in health care throughout the 1990s. These include:

- Cost-containment actions within health care organizations;
- Hospital re-structuring and re-organization;
- Reduced inpatient hospital stays and increased acuity of patients;
- Balanced Budget Act changes in Medicare and Medicaid reimbursements to providers for both medical care and education; and
- Lower fees from managed care contracts.

THE NURSING WORKFORCE — FORECASTS AND TRENDS

The American Health Care Association predicts that within two decades there will be a 14 percent shortage of nurses around the country. By the year 2020, the workforce of RNs is projected to be the same size it is today (approximately 2.2 million active nurses), falling close to 20 percent below projected workforce requirements (Buerhaus et al, 2000). Recent data regarding the nursing workforce in New Jersey paints an equally distressing forecast regarding workforce supply and demand.

At the present rate, New Jersey will experience a nursing shortage by 2005 with 18 percent of the RN positions unfilled.[3] By 2020, there is a projected 30 percent shortfall in the state's RN population. Nursing workforce policy experts in the state point out that prompt intervention is critical because a registered nurse requires four years of education and training.[4] Students enrolling in September 2001 would not be able to begin practicing until 2005 (Griffith, 2001; Dickson, 2001) (See Table 1).

The New Jersey Colleagues in Caring (CIC)[5] project has as part of its mission to ensure that the supply of nurses meets the demand for nurses and that the workforce is comprised of the right types of nurses with the right competencies and at the right cost (Dickson, 2001). As part of its research, the CIC has developed a sophisticated forecasting model and has found that:

- In five years, there will be a demand for 74,550 RNs and 23,786 licensed practical nurses (LPNs) in New Jersey
- Based on the current entry of nursing graduates

Table 1 - NJ Long-Term FTE Forecasts, 2006-2020

Year	Projected Demand	Projected Supply	Projected Shortfall
2006	74,550 RNs	60,600 RNs	18% (n=13,950)
	23,786 LPNs	20,000 LPNs	17% (n=3,786)
2020	78,100 RNs	54,000 RNs	30% (n=24,100)

Source: G. Dickson. New Jersey Colleagues in Caring, 2001.

into the workforce and the usual number of nurses leaving nursing, the supply of RNs will be about 60,600 and the LPN supply will be approximately 20,000 in five years

- By 2006, the nursing workforce will have almost 14,000 unfilled RN positions (18 percent shortfall) and almost 4,000 unfilled LPN positions (17 percent shortfall)
- By 2020, New Jersey will have over 24,000 RN positions unfilled, representing a projected shortfall of 30 percent

Another prominent trend in New Jersey's nursing workforce has been the decline of student nurse graduates. Since a peak in 1995, there has been a steady decline in entry-level RN graduates, with a 12 percent decrease in new RN graduates between 1997 and 1998, and a 12 percent decrease between 1998 and 1999. LPN graduates have declined steadily since 1994 (see Table 2).

In New Jersey – as in the rest of the country – hospitals continue to be the primary place of employment for nurses: close to 60 percent of all working RNs work in hospital settings (HRSA, 2001). According to New Jersey data from the American Hospital Association, although the number of staffed hospitals beds has decreased by almost 10,000 beds during the past 10 years, demand for hospital RNs has increased by 7,000 positions (Dickson, 2001).

SURVEY OF NEW JERSEY NURSES

A statewide survey of RNs conducted in October and November 2000 found that nurses reported: working longer hours, caring for larger numbers of acutely ill patients, and experiencing exhaustion and job stress as significant factors in their professional lives (Health Professionals and Allied Employees, Press Release, March 15, 2001). The survey, conducted by an independent firm, questioned nurses about staffing, working conditions, patient care, overtime and the nursing shortage. More than three-quarters of respondents reported that their facilities were short-staffed and only 11 percent felt that there were sufficient numbers of nurses available to provide quality care.[6] Almost one-third (31 percent) of the 900 RNs responding stated that the typical nurse-to-patient ratio in their unit was one-to-eight or higher, with 14 percent reporting a ratio of one-to-thirteen or higher (ibid).

Table 2 - New Jersey RN and LPN Graduates, 1997-1999

RN Graduates	1997	1998	1999
Associate Degree	1,046	990	890
Diploma	663	552	457
BSN	397	337	306
TOTAL	2,106	1,879	1,653
LPN Graduates	778	703	664

Source: G. Dickson, New Jersey Colleagues in Caring, 2001.

NURSING WORKFORCE — HISTORICAL CYCLES OF SHORTAGES

In order to grasp the magnitude of the current shortage, it is critical to understand the historical pattern of previous nursing shortages. The nursing profession has undergone cyclical shortages since the 19th century. Traditionally, there have been cycles in nursing workforce supply and demand, with differing reasons for shortages. Past shortages were most critical in certain geographic areas – such as rural parts of the country – and among nurses with specialized expertise, for example, pediatric and critical care nurses. The current shortage, by comparison, constitutes an across-the-board workforce shortage. This shortage is global. It is accompanied by shortages in related allied health professions and is characterized by an aging nurse population, both in practice and as educators (Nevidjon & Erickson, 2001).[7]

The development of a long-term undersupply of nurses in all likelihood stems from "patchwork" solutions to the shortages, rather than the implementation of long-term strategies designed to address the complexity of the issue (Seitz and Keenan, 1989). At the core of the nursing shortage problem is the lack of systematic means to measure, monitor and forecast the demand for the nursing workforce (Dickson, 2001). Experts and analysts agree that for sustained change and for the planning and assurance of a long-term adequate supply of nurses, solutions must be developed in several areas:

- Health care delivery systems
- Education
- Health policy
- The regulatory environment
- Professional image

Consensus-building and collaborative efforts from groups such as nursing leadership in practice and education, health care decision makers, public policy makers and the media will be critical to effect long-term research efforts and strategic planning (Keating & Sechrist, 2001; Peterson, 2001).

THE NATIONAL PICTURE — THE NURSING WORKFORCE

In February 2001, A Preliminary Findings Report of the National Sample Survey of Registered Nurses was released by HRSA's Bureau of Health Professions. The Bureau conducts the national sample survey of the registered nurse population every four years. The Survey Report shows significant findings regarding the status of the nursing workforce, which have broad health policy and medical care implications on national and state levels.

- The rate of growth for nurse licensure has declined sharply in the past four years – a small 5.4 percent increase since 1996
- This rate is the lowest rate of growth reported since 1975; by comparison, the 1992-1996 survey indicated a 14 percent growth rate in nurse licensure
- The national nursing workforce is estimated at 2.7 million (March 2000)
- The average nurse's age is estimated at 45.2 years, a year older than in 1996
- More than two-thirds of nurses are over age 40; less than 10 percent (9.1) are under age 30
- By conservative estimates, by 2020, the country will fall 20 percent short of the RNs needed to meet health care needs
- Only an estimated 7.3 percent (196,279) of the total RN population are prepared to practice at least one advanced practice role – e.g., clinical nurse specialists and nurse midwives
- Nurses are not well distributed geographically: there is a broad variation across regions – the highest concentration of nurses is in New England (1,075 RNs per 100,000 population). The lowest concentration is in the Pacific region (596 per 100,000). The West-South Central region (Arkansas, Louisiana, Oklahoma and Texas) had the second lowest concentration
- New Jersey's ratio was 800 RNs per 100,000 population; the Middle Atlantic total (New Jersey, New York and Pennsylvania) was 885 per 100,000; the national average in 2000 was 782 RNs per 100,000 population
- As in the physician workforce, there is significant under-representation of minorities in the nursing workforce. More than 25 percent of Americans are members of racial and ethnic minority groups, but fewer than 13 percent of all RNs are members of these groups.[8]

- In the past, the U.S. has turned to drawing nurses from other countries – the Philippines is a prime example – in order to fill in the gaps for nursing shortages. At this time, the nursing shortage is a global issue, and reliance upon other countries for nurses in the U. S. is not a reliable alternative to the country's nursing demands

COMPLEX FACTORS CONTRIBUTING TO THE SHORTAGE

• Aging of the Nursing Workforce

Longitudinal research indicates that the nursing workforce is aging at a rapid rate. Two primary factors are contributing to this trend: (1) the large numbers of "baby-boomers" who are in the nursing profession and who soon will be entering retirement, and (2) the declining numbers of younger people who are choosing to enter the profession (Center for Health Policy, George Mason University, February 2001).[9] At the same time, the demand for nurses is created by health care and medical needs such as rapidly evolving high-technology medicine, aging and long-term care needs of a significant percentage of the population with chronic health problems, and the heightened medical acuity levels of patients in hospitals.

Dr. Peter Buerhaus, whose research has yielded some of the most sophisticated and valid forecasts regarding the nursing workforce, affirms that his projections demonstrate not only a decline in the overall labor supply, but also a continued aging of the nursing workforce (Buerhaus et al, 2000). He further points out the significant implication to policymakers and the importance of developing appropriate responses to the issue that the decline in the supply of RNs will come "at a time when the first 78 million baby boomers begin to retire and enroll in the Medicare program in 2010" (ibid).

• Fewer People Entering the Nursing Profession

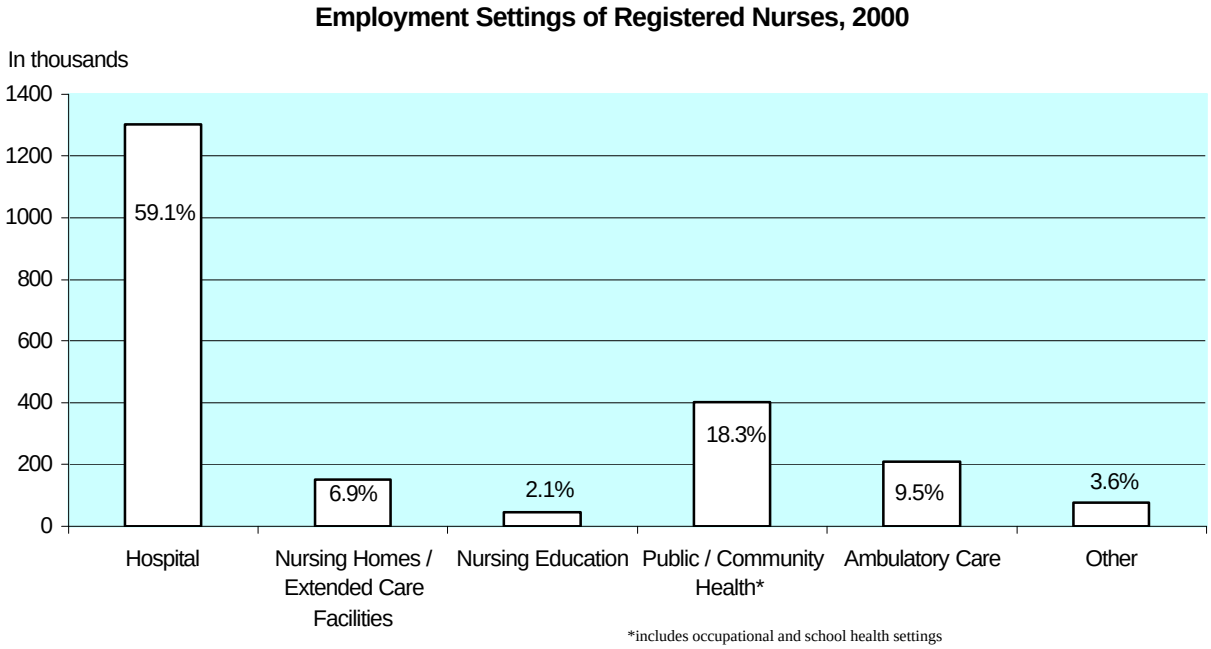
Nursing, as teaching and social work, has historically been a single-gender dominant profession: women comprise close to 94 percent of the nursing workforce. At present, about 6 percent of nurses are men, an increase of just .6 percent from 1996. As a result of a variety of social and economic factors that have occurred over the past 15 years, women now have a much broader range of opportunities in the larger professional workforce environment and are entering the nursing profession in fewer numbers. There is also anecdotal evidence that college-age men and women are not motivated to enter the nursing profession because of the absence of a positive professional image. (Nevidjon & Erickson, 2001; Trafford, 2001). The media often projects the profession as unpredictable and "high-risk," owing to the demands of the profession and the overall health care environment. In contrast to these beliefs, Dr. Mary Wakefield of George Mason University cites a recent Gallup poll which indicates that for the second year in a row, when the American public was asked to rank categories of well-respected professionals, nurses were "at the top" (*The Washington Post*, February 27, 2001). There is a significant challenge to communicate this positive image to young people when they make professional choices.

Salaries have been identified as limiting interest in the nursing profession. The actual average earnings of RNs employed full-time in 2000 were $46,782. However, when the CPI is used to measure "real" salaries, that figure decreases to $23,369. In using the CPI formula, "real" salaries for nurses have remained flat since 1992. Research conducted by Peter Buerhaus found that during the 1980's, the hourly wages for RNs increased by approximately 3 percent each year. In contrast, during the 1990's, hourly wage growth remained flat (Buerhaus et al, 1999).

• Increased Demand for Nurses in Different Health Care Settings

Although 60 percent of all RNs work in hospitals, the need for care is shifting to other locations, largely as a result of changes in the health care delivery system and the growth of an aging population. Expansion of home and community-based settings is common throughout the country. New Jersey has been an extremely "active" state in developing new types of community-based assisted living arrangements for its elderly and disabled population.

HRSA's Nursing Profile Survey reports five major employment settings for RNs: hospitals, nursing homes and extended care facilities, community and public health settings, nursing education and ambulatory care settings. Following hospitals, the next



Source: HRSA. National Sample Survey of Nursing, 2000.

highest percentage of nurses reported being employed in public health or community health settings. An estimated 9.5 percent of RNs reported employment in ambulatory care settings, including physician's offices and HMO's, and 6.9 percent reported working in nursing homes and long-term care facilities. The smallest percentage of RNs – 3.6 percent – reported working in nursing education settings, administrative agencies, planning or provider associations, and insurance companies (See, "Employment Settings of Registered Nurses," above).

• Research and Data Limitations

Because of the varying licensure categories and authority in every state, researchers agree that the nation's healthcare workforce as a whole – comprised of over 20 allied professions including nursing – is difficult to track.

There are limitations in HRSA's National Sample Survey of Nursing. Because of the scale of the sample size, results are not generalizable to states with small populations. Researchers studying health workforce issues historically have relied upon demographic data from the U.S. Bureau of Census' Current Population Survey (CPS) and the Bureau of Labor Statistics. Researchers Buerhaus and Staiger in their work tracking trends in the nurse labor market, point out that the CPS – which covers a nationally representative sample of more than 100,000 persons – is the only source of annual data for all nursing personnel (RNs, LPNs and aides) employed in both hospital and other settings (1999). Although the CPS is not without its limitations, researchers aver that it offers advantages over the data commonly used to analyze the nurse workforce, including the American Hospital Association Personnel surveys and the federal National Sample Surveys of Registered Nurses, referenced elsewhere in this paper (See Appendix I for a listing of selected websites discussing the nursing shortage).

HRSA administrator Dr. Claude Earl Fox asserted that the most "effective forecasting" requires knowledge about local communities. The importance of the planning and development of model research centers on the nursing workforce within states, regions and at the local level – such as the North Carolina Center for Nursing (NCCN) – becomes all the more significant in light of data limitations and the need for reliable and valid state-level research. (The web address for the NCNN, which was established in 1991, is www.ga.unc.edu/NCCN). The Center was the first state-supported agency in the country designed to conduct strategic nurse workforce planning and research. Current initiatives of

the Center include the development of a statewide strategic plan and the engagement of regional alliances among health industry stakeholders, including providers, regulators, state government, provider associations and educators.

- **Current Nursing Work Environments**

The American Nurses Association's (ANA) 2000 Congress on Nursing Practice & Economics believes that "the U.S. health care industry has failed to maintain a work environment that is conducive to safe, quality nursing practice and that retains experienced U.S. nurses within patient care." A survey conducted by the ANA of nurses across the country found that as a result of reduced time for patient care, 75 percent of those surveyed felt that the quality of nursing care at the facility in which they worked had declined over the past two years (ANA February 6, 2001, *Press Release*; www.nursingworld.org). Fifty-six percent of respondents reported that the time they have for patient care has decreased and over 50 percent said they would not recommend their profession to their children or friends (ibid). The recent survey findings also correlate with nursing workforce researchers' concerns about the aging of the workforce: almost 65 percent of the respondents to the survey were between the ages of 41 and 60, indicating that they would be likely to retire within the next two decades.

Research by Dr. Linda Aiken at the University of Pennsylvania indicates that even though there have been increases in the employment of RNs in hospitals between 1984 and 1994, they have not kept pace with increased case-mix severity. That is, the patients for whom they are caring in the hospitals are coming in with more severe illness and complex medical problems. At the same time, the number of other nursing staff such as licensed practical nurses (LPNs) and nursing aides has been reduced. As a consequence, RNs are responsible for providing more of the care to a population of sicker patients (Aiken et al, 2000; Institute for the Future, 2001). Aiken goes on to cite her own and various other research studies which show that the variation in the nurse-patient ratio is a major determinant on patient outcomes and that excess death rates decline as nurse staffing increases (ibid; American Hospital Association Survey Data, 1998). A recent analysis of issues related to the adequacy of nurses working in different health care settings notes that nurse/patient ratios in long-term care and skilled nursing facilities are lower than necessary to offer quality health care (*State Health Notes*, 2001). As with Aiken's study, research findings indicate that nursing home residents have poor health outcomes when facilities are understaffed (ibid).

MULTI-FACETED SOLUTIONS TO THE SHORTAGE PROBLEM

Policy analysts studying the cycles of the nursing shortage and the factors contributing to it advocate for a concerted effort to move nursing workforce planning to the state level in order to anticipate and respond to the complicated environment of workforce supply and demand. At present, recruitment strategies by the health care industry and policymakers in New Jersey as elsewhere have taken the form of tuition forgiveness and "sign-on bonuses." Critics of these strategies view them as short-term, reactive solutions to a complex problem that requires more sophisticated analysis and planning.

Solutions and strategies to remediate the current nursing workforce crisis are multi-faceted. In the area of education, experts believe that federal, state and private support is needed to enhance capacity in nursing education programs. Outreach to younger students in middle and high schools is essential to promote the benefits of a career in nursing. The aging of the nursing workforce also has implications in the field of nursing education. Peterson (2001) cites statistics from the American Association of Colleges of Nursing that the average age of nursing school associate and assistant professors respectively are 52.1 and 48.5 years of age. She points out that the combined factors of the aging of the nursing faculty and an overall flat enrollment in doctoral programs that produce nurse educators will "impact the capacity of nursing schools to educate sufficient numbers of registered nurses to meet the future demand" that demographers predict (ibid).

The development of strategies focused on the retention of nurses in specific work settings is equally as important as the design of effective recruitment strategies. Survey research has indicated that nurses stay in settings where they feel valued and can provide high-quality care. The American Nurses Association certifies hospitals for meeting specific standards of nursing care as magnet hospitals (www.ana.org/ancc). Studies of magnet hospitals and their impact on patient care have shown a positive correlation with patient health outcomes.[10] In a 1994

study following Medicare patients, Dr. Aiken at the University of Pennsylvania School of Nursing found that magnet hospitals reported five fewer deaths for every 1,000 patients discharged (Parker-Pope, 2001).

Related Issues — Concerns about Patient Quality of Care in Hospitals

A recent *Wall Street Journal* front-page profile focused on the nursing crisis and identified the ways in which the shortage is seriously affecting the quality of care delivered in hospitals where nursing care is under-staffed and over-worked (resulting from mandatory overtime requirements) (Parker-Pope, 2001). According to the article, those who can afford it are adopting "BYON" strategies – "Bring Your Own Nurse" – and are hiring 24-hour private duty nurses for their hospitalized relatives and friends.

The National Council of State Boards of Nursing (NCSBN) has issued statements recognizing that because of the nursing shortage, the need for public protection through regulation is significant: "Failure to maintain standards in practice could lead to an increase in errors, increased risk for patient harm and a lack of public confidence" (NCSBN, January 2001).

In response to nurses' growing concerns regarding the erosion of their working conditions and the compromises in quality of care they are able to provide to patients, the states of California and Massachusetts passed "whistle blower" laws in the summer of 2000 that protect workers against retaliatory or punitive actions from employers for reporting safety or quality concerns (Gordon, 2000).

The American Nursing Association and its Constituent Member Associations (CMAs) have identified the following priorities for 2001 as part of their state legislative agenda to address staffing issues:

- Restrictions on mandatory overtime
- Increased whistle blower protections
- Mandated collection of workforce and nursing-sensitive quality data[11]
- Establishment of patient classification systems requiring health care facilities to develop and utilize valid tools to calculate the appropriate level and mix of nursing staff (RNs, LPNs, nursing assistants) needed to deliver safe, quality care

Regarding the issue of nurse staffing levels and acceptable staff-patient ratios for delivery of care, specific ratios are established within each specific health care setting. At present, California is the only state that statutorily mandates nurse-patient ratios.

The Joint Commission on Accreditation of Healthcare Organizations is currently seeking input on draft standards to assess the effectiveness of staffing in health care organizations (www.jcaho.org). In a March 26, 2001 report in the American Hospital Association *News*, it was reported that the JCAHO model does not rely on staffing ratios, which it refers to as an "undesirable problem resolution" (March 26, 2001). It has developed an evidence-based assessment model that "relies on the application of clinical and human resources indicators to screen for potential staffing issues" (ibid).

State-Level Actions on the Nursing Shortage

Many states are beginning to look at solutions to the shortages and several have or are considering legislative actions. Critics of legislative remedies offer a different perspective on strategies for short and long-term remediation of the shortage. Health economist Uwe Reinhardt, in addressing the issue, has commented: "The idea that government should plan or direct the size and distribution of the nation's workforce is ill-advised" (*State Health Notes*, 2001). Addressing the problems related to the difficulty and "crudeness" of forecasting demand, he observed that the more appropriate role for government is "ongoing monitoring" of regional and labor markets.

The states of California and New York are experiencing large nursing shortfalls. New York, for example, has experienced a decrease of 22 percent among its nursing graduates since 1996. California is experiencing significant nursing shortages as well. At present, the state brings in many more nurses from other states (Oregon and Washington, for example) and countries than are educated within California's nursing schools.

The state of California became the first state to promulgate a safe-staffing law, which requires that by the year 2002, the state Department of Health implement safe nurse-to-patient ratios and limit the "floating" of nurses between units (Gordon, 2000). The Governor signed the bill in the face of much opposition by the state's hospital association (ibid).

In many states legislation has been introduced aimed at improving health care facility working conditions. Legislation to prohibit mandatory overtime has been introduced in the states of Connecticut, Hawaii, Nevada, New York and Washington. In New Jersey, S-2093 (Vitale, Bennett) has been introduced to ban mandatory overtime for caregivers in hospitals and nursing homes.[12] The American Nursing Association's legislative group expects that other states will introduce similar legislation during 2001 (www.nursingworld.org).

The Maryland Senate is looking at a range of remedies including, but not limited to, tuition aid for nurses returning to the field (ibid). A statewide Commission was established to study the effects of the nursing shortage and develop strategies to address them. In California, where the nursing shortage is at its most severe, two bills have been introduced focusing on nurses' education; one would allocate funds "to increase the capacity of the state's colleges to accept more students" (ibid).

In New Jersey, other legislative activity in response to the issues raised by the nursing shortage include:

- S-2205 (Vitale, Sinagra), which would appropriate $1.2 million to establish the New Jersey Collaborative Center for Nursing at Rutgers University. The Center would focus on improving such areas as nursing education, recruitment, retention and utilization of adequately prepared personnel[13]
- S-2093 (Vitale, Bennett) which prohibits health care facilities from requiring certain hourly wage employees to perform overtime work[14]
- S-2206 (Matheussen), which appropriates $5 million to establish a Specialty Nurse Education and Training Pilot Program in the Department of Health and Senior Services to provide financial support to hospitals, long-term care facilities and home health care agencies to establish nurse specialty training programs for registered professional nurses employed by these agencies.

As a result of foundation support, the Rutgers College of Nursing in New Jersey received a $2 million grant from The Robert Wood Johnson Foundation towards construction of a new facility to serve approximately 200 undergraduate nursing students.[15] On March 8, 2001, Senators Jack Sinagra (R-18) and Joseph Vitale (D-19) introduced S-2204, which would appropriate $2.3 million to the College to expand their facilities with labs and state-of-the-art equipment. The college is involved in a project – Improving Health Care through Nursing Education – as part of its initiative to attract higher numbers of qualified students into the profession.

FEDERAL ACTIONS

Public sector responses to the nursing shortage are not limited to state-level activities. Initiatives are emerging from Congress aimed at addressing aspects of the issue. Federal strategies being looked at include:

- Tax incentives for nurses to attend school and advance training;
- Direct funding for scholarships and assistance with loan repayments;
- The development of a national "Nursing Service Corps" through which nursing students would receive school training at a free or discounted rate in exchange for working two years in under-served areas; and,
- Establishment of academic-industry partnerships.

At a policy forum focusing on the nursing shortage – "Hard Numbers, Hard Choices" – held recently by the Center for Health Policy at George Mason University, Senators Jim Jeffords (R-VT) and John Kerry (D-MA) announced that they planned to co-sponsor a bill, "The Nursing Reinvestment Act," to address the problem and stimulate support for nursing education and practice. The broad proposal would include an outreach campaign to attract young people to the field and to offer financial support for institutions that provide advanced training for nurses. At present, publicly funded nursing programs comprise less than one-tenth of one percent of national spending for health professions education (http://chpre.gmu.edu).

At a Senate Committee on Health, Education, Labor and Pensions meeting held on February 13, 2001 to discuss "The Nursing Shortage and Its Impact on

America's Health Care Delivery System," Senator Pat Roberts (R-KS) spoke to the importance of bi-partisan support in addressing the problem of the national shortage (*NJHA NewsLink*, 2001).

The proposed Jeffords/Kerry bill would also expand funding under Medicare for clinical nurse education in non-hospital settings, which differs from traditional Medicare reimbursement models. At present, HRSA does provide some funding support from the federal level for health professions' education. In 2000, the agency also provided $80 million in funding to support nursing education programs to encourage better ethnic and geographic representation in the nursing workforce, and to support practice in under-served areas.

Concluding Comments

The current nursing workforce shortage represents one in a long history of recurring cyclical shortages for which short-term and, in most cases, "patchwork" solutions have been used. The ways in which this shortage differs in both scope and complexity – including the aging of the nursing workforce, the reduced numbers of people entering the profession and greater demands for the provision of appropriate medical care in various health care settings – require that strategies be well-coordinated among all stakeholders and providers and that they have long-range impacts on future workforce supply and demand trends.

Policy Implications

Regulatory Issues

As exemplified by health economist Uwe Reinhardt's opinion that mandating solutions through legislation is not an appropriate response to the nursing workforce problems, there are diverse views on remedies. Across the country, hospital associations are voicing some of the strongest opposition to legislative actions. In New Jersey, speaking at a Senate Hearing on S-2093 – which would prohibit hospitals from requiring nurses and other healthcare workers to work overtime during periods of short staffing – New Jersey Hospital Association President Gary Carter raised concerns that the requirement would have a negative impact on quality of care offered to patients by limiting access to nursing care.

How will we design long-term solutions to the shortage that take into account all possible unintended consequences of proposed remedies?

Research – State-Level Collaborative Centers for Nursing

In the dynamic environment of health care delivery, organization and financing, the coordination and collaboration at regional and local levels becomes all the more critical. Through grant-supported initiatives like The Robert Wood Johnson Foundation's Colleagues in Caring: Regional Collaboratives for Nursing Work Force Development several states are using such collaborative models to address data, research and master planning issues regarding nursing manpower and education. Advocates for these programs underscore the importance of establishing state-supported direct funding for nursing centers; however, achieving such commitment varies broadly from state to state.

The North Carolina Center for Nursing represents a sophisticated state-supported center which is actively addressing the complex strategic planning and response issues related to the nursing workforce. Its most recent study in February 2001 – "Nursing Shortage Areas in North Carolina" – offers a comprehensive analysis of 125 hospitals and hospital systems regarding their current and future needs for nursing personnel and offers policy solutions to be considered for proactive planning and solutions.

Is this type of research center an exemplary model for New Jersey? Would such a center facilitate the development of such proactive strategies as designs for educational mobility and collaboration for articulation in nursing education?

Recruitment – Cultural Diversity

A March 2001 health policy meeting convened on Capitol Hill in Washington, DC, focused on strategies being used to rebuild the nursing workforce. Specific recruitment strategies were discussed for increasing and diversifying the nursing workforce in states throughout the country, especially in the recruitment and training of ethnic and cultural minorities. New Jersey is a state with great cultural diversity in its population.

What level of commitment is there to explore strategies targeted at recruitment and retention for under-represented groups in nursing education?

Retention of Nurses

Research demonstrates the importance of magnet hospitals – those accredited by the American Nurses Association for meeting specific standards – to retain nurses. At present, New Jersey has several magnet hospitals that are located throughout the state.

How can policymakers ensure that state residents have equitable access to care in magnet hospitals? How can the number of such hospitals in New Jersey be increased?

Shortages among Allied Health Care Workers

Health care workforce shortage issues are not limited to the nursing profession. The shortage of nursing aides, attendants, orderlies and home health aides, especially in the area of long-term care, has critical implications for the quality of care delivered in nursing facilities. One national study found that turnover for nursing aides in nursing homes is 100 percent (*State Health Notes*, 2001). North Carolina's Health and Human Services Department conducted a 1999 survey of states around the country on public policy issues related to the shortage of aide workers. Approximately 90 percent of the 48 states responding indicated that recruitment and retention were critical policy issues relating to nursing aides in long-term care facilities.

Eighteen states have adopted "wage pass-through laws" that raise Medicaid reimbursement for long-term care providers and identify some or all of the increase for staff wages and benefits (Fox-Grage, 2000). These laws are the most common mechanism that states are using to improve pay for direct care workers (*State Health Notes*, 2001).[16] The state of Maryland has introduced several bills aimed at addressing the root problems of the shortage, including one introduced by Senator Leonard Teitelbaum that would give income tax credit to nurses working in LTC facilities and specific nurse training programs. In the absence of legislative remedies, other states – such as North Carolina – have created task forces to study the issue over time (Id).

What strategies is New Jersey exploring to estimate and address shortages in other allied health professions in the state?

Nursing Recruitment and Professional Image

The classical Greek poet Homer tells the story that when the hero Odysseus returns home after ten years, only his nurse recognizes him, even when his family and friends do not. The image of "nurse" is embedded in the cultural, psycho-social and medical fabric of our history and has long been associated with such familiarity and knowledge about those they have cared for. In fact, the very word – *nurse* – stems from the Latin word verb "to nurture."

The image of nursing as a profession is currently challenged by several factors, including the media's representation of it as a "high-risk" profession. How can positive campaigns be developed to attract and retain individuals to enter the nursing profession? The Rutgers College of Nursing is working jointly with hospitals, health care facilities and health care organizations to promote the career path of nursing. Initiatives are also being planned to reach out to school guidance counselors and education leaders to inform them about the benefits of nursing. For example, in a recent initiative, the University of Maryland School of Nursing is partnering with a public relations firm that is donating $1.2 million in support and services to develop an integrated marketing plan to recruit more nursing students (Nevidjon & Erickson, 2001).

How can support for such collaborative partnerships in nursing education and practice be sustained as potential long-term strategies?

Nurse Satisfaction and Retention

Dr. Georges C. Benjamin, secretary of Maryland's Department of Health and Mental Hygiene, commented at a Congressional hearing on the nursing shortage: "They're not coming in; they're not staying in; and while they're here, they're not happy" (Jakes, 2001). A 2000 survey conducted by the American Nursing Association found that 70 percent of nurses responding reported that they were exhausted and not fulfilled in their work. Findings from the Bureau of Labor Statistics show that in 1996, over 700,000 health care workers suffered an injury or illness, compared to 1990, when this number was close to 350,000 (Gordon, 2000). Of the 91 categories of workers that the Bureau measures, RNs ranked fourth in days lost at work as a result of nonfatal injuries and illness. Sophisticated research and analysis is critical to understand the reasons for these increases and to evaluate the importance of working conditions for health professionals.

What level of interest and commitment is available to support such research in both public and private sectors?

ENDNOTES

[1] Reference is made to G. P. Zachary's "Shortage of Nurses Hits Hardest Where They are Needed Most" on the issue of the global shortage of nurses and the trend of nurses in developing countries leaving to take positions in "richer" nations (*The Wall Street Journal*, January 24, 2001).

[2] Reference is made to presentations reported at "Health Workforce 2000," a conference cosponsored by the National Conference of State Legislatures and the Health Resources and Services Administration in December 2000 (*State Health Notes*, February 26, 2001).

[3] NB: New Jersey data and statistics referenced in this Issue Brief are from the New Jersey Colleagues in Caring (CIC) project and its Nursing Forecasting Model, unless otherwise indicated. Data sources for forecasting are: the New Jersey Board of Nursing, the New Jersey Department of Labor, the American Hospital Association, the National League for Nursing, The New Jersey Department of Health and Senior Services, the New Jersey Commission on Higher Education, AACN, and HRSA's Division of Nursing.

[4] See Appendix II for definitions of nursing nomenclature.

[5] Colleagues in Caring is a national grant program funded by The Robert Wood Johnson Foundation; its purpose is to help states and regions build systems of work force development with the capacity to adapt to the changes in the health care system (www.aacn.nche.edu/CaringProject/). Sites are located throughout the country, including the one referenced here in New Jersey. The CIC Collaborative in New Jersey is comprised of various departments in government, provider associations, education associations and labor groups, including: Council of Baccalaureate and Higher Degree Programs, Association of Diploma Schools of Professional Nursing, the New Jersey Hospital Association, New Jersey Department of Health and Senior Services, Health Professionals and Allied Employees (HPAE), Licensed Practical Nurses Education Council, Home Health Assembly, Concerned Black Nurses, New Jersey Board of Nursing, New Jersey State Nurses Association, University Health System, New Jersey Nursing Students, the Association of Health Plans, and the Organization of Nurse Executives, among others.

[6] Findings from the survey can be found in the complete report: "Why There is a Nursing Shortage: Answers from the Frontlines of Health Care. A Survey of Registered Nurses in NJ." Health Professionals and Allied Employees, AFT/AFL-CIO. Anzalone Research Inc., 2000.

[7] On forecasts regarding the aging of the nursing workforce, Buerhaus (2000) predicts that 40 percent of nurses by 2010 will be 50 years old or older. At present, approximately one-third of the nursing workforce is over 50 years of age and the average age of full-time nursing faculty is 49 years.

[8] HRSA Survey Report findings suggest that comparisons of the racial/ethnic composition of the RN population should be "viewed carefully" because of changes in definitions made by the Office of Management and Budget for the 2000 census.

[9] It is estimated that not only over 78 million baby-boomers will be approaching retirement in the next decade, but also that the most rapidly growing group of the elderly is those aged 85 and over, who have the most intensive health care conditions and needs.

[10] According to the American Nurses Association, New Jersey's magnet hospitals are: Jersey Shore Medical Center, Hackensack University Medical Center, the Medical Center of Ocean County, Riverview Medical Center, Robert Wood Johnson University Hospital, St. Francis Medical Center, St. Peter's University Center and St. Joseph's Hospital and Medical Center.

[11] This data would be used as a means of making health care facilities publicly accountable for the quality and cost of care delivered to patients and for the staffing levels used to deliver that care (ANA, 2001).

[12] Although a similar bill was passed by the Legislature in 2000, it was conditionally vetoed by then Governor Christie Whitman in September 2000.

[13] The center would continue the efforts of the Robert Wood Johnson Foundation sponsored New Jersey Colleagues in Caring project.

[14] S2093 supplements the "New Jersey State Wage and Hour Law" by establishing a maximum work day and work week for hourly wage health care facility employees. At present, health care facilities are not prohibited from requiring that their hourly wage employees accept overtime work.

[15] The grant has two components; $1.5 million is in the form of a contingent matching grant. The Commonwealth of Massachusetts has been proactive in addressing health workforce shortage issues through its legislature: the 2001 budget includes a $35 million appropriation for wage pass-throughs and the Nursing Home Quality Initiatives include recruitment and retention strategies which includes a career ladder grant program for nurses' aides (NCSL, 2001).

[16] Geraldine Bednash of the American Association of Colleges of Nursing has indicated that the "three-way" system discourages students from entering the system and has called for a reform in nursing to attract more college-bound students.

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APPENDIX I

SELECTED WEBSITES DISCUSSING THE NURSING SHORTAGE

American Nurses' Association	http://nursingworld.org
Nurses for a Healthier Tomorrow	http://www.nursesource.org/
HRSA, Bureau of Health Professions	http://www.bhpr.hrsa.gov
National Institute for Nursing Research	http://www.nih.gov/ninr
National League of Nursing	http://www.nln.org
Bureau of Labor Statistics	http://www.bls.gov
American Hospital Association	http://www.aha.org
American Organization of Nurse Executives	http://www.aone.org
American Association of Colleges of Nursing	http://www.aacn.nche.edu
Allnurses.com	http://allnurses.com
Nurse.com	http://nurse.com
HRLive	http://hrlive.com/reports/
Colleagues in Caring Project	http://www.aacn.nche.edu/CaringProject
Other Websites: Specific State Nurses' Associations Nursing Specialty Organizations	

Source: Nevidjon and Erickson, 2001

APPENDIX II

NURSING EDUCATIONAL and PROFESSIONAL PROGRAMS

The Bellevue Hospital School of Nursing opened in 1873 and was the first U. S. nursing school organized around the model developed by Florence Nightingale (Seitz & Keenan, 1989). Since that time, nursing educational and professional programs have developed in different ways throughout the states. In order to understand the implications of nursing workforce issues, it is necessary to have a "roadmap" for the various designations that represent different levels of education, clinical training and accreditation within the profession. Professional nomenclature refers to individuals who have studied nursing in programs that include: diploma programs; and associate, baccalaureate, masters, and doctoral level degrees.

At present, a Registered Nurse's (RN) license may be awarded by:

- 3-year hospital training programs accredited by the New Jersey State Board of Nursing (diploma programs)
- 2-year programs in community and/or junior colleges (associate degree)
- 4-year university-based baccalaureate (bachelors degree) programs, which offer a professional degree in nursing (BSN) and allow for entry into graduate study

Graduate nursing degrees include:

- Nursing master's degree programs, which prepare graduates for advanced specialized practice roles, administration and teaching
- Doctoral degree programs, which prepare students for a variety of options, including research, university professorship, clinical practice and administrative positions

Advanced practice training in nursing:

- Advanced Practice Nurses include clinical nurse specialists, nurse anesthetists, nurse midwives and nurse practitioners. Clinical nurse specialists and nurse practitioners comprise nearly 80 percent of all advanced practice nurses (March 2000 Survey of Registered Nurses)
- Nurse Practitioners (NP) are RNs who work as a primary care providers. Their primary place of employment differs from RNs in that 90 percent of NPs work in outpatient settings, one-third of which are private practices or HMOs. At present, only nine states permit NPs to practice independently of physicians (Institute for the Future, 2000)

The National Sample Survey of Registered Nurses reports that during the past 20 years "there has been a shift in graduations from basic nursing education programs away from diploma programs to either associate degree or baccalaureate programs." In March 2000, 22.3 percent of the RN population surveyed reported that had a diploma; 34.3 percent reported having an associate degree; 32.7 percent had baccalaureate degrees and 10.2 percent a master's or doctoral degree.