The health of our health care system depends on nurses.
To demean, diminish, or eliminate them puts the entire system in jeopardy.
Claire Fagin

REMEDIES FOR THE NURSING SHORTAGE

A Report to Acting Governor Richard J. Codey

from

The Advisory Council
To Promote The Profession of Nursing in New Jersey

March 2005

THE ADVISORY COUNCIL FOR THE PROMOTION OF THE PROFESSION OF NURSING IN NEW JERSEY
NEW JERSEY DIVISION OF CONSUMER AFFAIRS
124 HALSEY STREET
NEWARK, NJ 07102

March 23, 2005

The Honorable Richard J. Codey
Acting Governor of the State of New Jersey
P.O. Box 001
Trenton, NJ 08625

Dear Acting Governor Codey:

Re: Transmission of the Advisory Council's Report

Nurses are the health care providers who patients are most likely to encounter during some of their most vulnerable moments—in emergency rooms, hospitals, nursing homes, clinics/physicians' offices, or in their own homes. This Council was formed to address issues of, and solutions to, a nursing shortage. This report is the outcome of the work of the Council as we met the challenges of the original Executive Order 139, 2002.

We present this report to provide you, Acting Governor Codey, with evidence-based recommendations to address three key areas of the nursing shortage: nursing education, recruitment of nurses, and retention of nurses in the workplace. The recommendations are based on testimony from three public hearings, a panel of experts on specific nursing issues, and the dialogue and deliberation of members of the Council. Because of the centrality of nursing care in achieving positive patient outcomes, we offer these recommendations for urgent consideration by you, as well as by the health care industry, labor unions, nursing education, governmental departments, and nurses themselves.

Over time, cycles of shortages and abundance have plagued nursing, with the last one occurring in the late 1980s. That shortage, as others had been, was short-lived. On the other hand, this nursing shortage is not only lingering on, but is predicted to increase dramatically.

Many societal and health care factors have coalesced to make this shortage uniquely different from those of the past. As societal roles have changed, more and more women who earlier might have chosen nursing now choose other professions, even as nursing remains primarily a women's profession, 96.6 % female in New Jersey.

At the same time, our nation's citizens are growing older, living longer, and, therefore, are more likely to need hospital and other health care services. Similarly, 40% of New Jersey RNs are over the age of 50, while only 5.5% are 30 and under. This means that 40% of nurses will be eligible for retirement soon and the necessary nurse replacements will not be there to care for an aging population.

Moreover, health care, itself, has lost some of its prestige for career seekers. The responses of the health care system to rising costs and changes in the financing of health care resulted in various attempts to reduce costs by decreasing the number of nurses and their support staff; while shifting control of

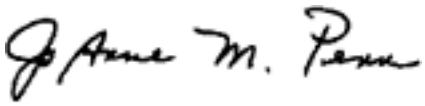
many health care decisions from health care providers to payers of health care. These strategies contributed to a changed perspective of the health care professions. At the same time, increased technology and new medical treatments have created an increased demand for health care services by informed health care consumers.

It will only be through carefully planned and implemented short- and long-term strategies to create change that we can prevent, or minimize, all aspects of this looming health care crisis for New Jersey residents. The Council rated 12 of its recommendations with priority status. Of these, six relate to retention of nurses, and three each to the education and recruitment of nurses. The Council strongly encourages you, Governor, to initiate prompt action on these recommendations.

Thank you for your attention to this important matter.

Sincerely,

Geri L. Dickson, Ph.D., RN
Council Co-Chair



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ACKNOWLEDGEMENTS

The Governor's Advisory Council thanks the many individuals who contributed to making this report a reality. The Council members met regularly in small groups, as well as together. They invited, listened, and discussed the presentations of the panel of experts who shared their expertise with the Council. The members also listened attentively to the testimony at three public hearings held in the north, central, and southern parts of the State.

We thank Becky Rice for her thematic analysis of the extensive testimony and hearing reports, the careful review of the literature, and for preparing the many drafts of this report. We thank Geri Dickson for her contributions and coordination of the Council members' comments on all aspects of the report, and for guiding the final drafts.

Also, thanks to the New Jersey Collaborating Center for Nursing for its generosity in scheduling and hosting the Council's meetings, arranging for the nationally recognized experts, and for its overall support for the Council and this report. Thanks, too, to Peg Knight for facilitating the process of forming the recommendations.

The Council gratefully acknowledges the assistance of members from the Department of Law and Public Safety and the Division of Consumer Affairs, who provided the staff and technical support to allow the report to be completed. Special thanks to former Director Reni Erdos for agreeing to house the Council, for her support in preparing the report, and attending many meetings. Thanks also to former Deputy Attorney General Alexandra Garcia, who combined her nursing and legal skills to provide ongoing guidance to the Council; to Chuck Manning for serving as a hearing officer; and to Lolly Merced for recording and distributing the minutes of the meetings.

Two small grants allowed the work to be well documented and evidence-based. For that we thank Johnson & Johnson who provided funds for the meetings and the panel of expert presentations. We are also grateful to Senator Joseph Vitale, a long-time friend of nursing, who worked to provide State funds to support the writing of this report.

As elected co-chairs, Geri Dickson and Jo Anne Penn were privileged to guide, support, and communicate through this report the Council's leadership, dedication and comprehensive discussions to recommend effective ways to remedy this nursing shortage.

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EXECUTIVE SUMMARY

The nursing shortage in New Jersey is well documented and predicted to worsen steadily over the next 15 years unless specific strategies are instituted to address the underlying causes of the shortage. Nurses, as the largest component of the health care workforce, are vital to the public's health, and research indicates that without sufficient numbers of well-qualified nurses and nursing personnel, patients' lives and well-being are at stake.

Within the context of a growing nursing shortage, the then-Acting Governor John Bennett established the Advisory Council for the Promotion of the Profession of Nursing in New Jersey (the Council) through Executive Order 139 (2002). The Council's charge (Appendix A) was to assist the Governor in proposing legislation by developing recommendations based on the following objectives:

- Include a determination of the current extent and long-term implications of the growing shortage of nursing personnel in the State;

- Relate the recommendations to the education, recruitment, and retention of qualified nursing personnel in New Jersey; and

- Evaluate mechanisms currently available in the State and other states that are intended to enhance the education, recruitment, and retention of nurses in the workforce.

The Council met nine times, from December 2002 until January 2004. During its meetings, the Council heard presentations from experts in nursing education, nursing service, educational accreditation, and pension plans. In addition, the Council held three public hearings regarding solutions to the nursing shortage, pursuant to the three objectives of the Executive Order.

Recommendations: The Council offers the following 29 recommendations. Although each recommendation is deemed important to help New Jersey solve the nursing shortage, the Council first approved five ranking categories for its recommendations. The top three rankings, in descending order, "highest," "very high," and "high," are each considered essential and critical strategies to be undertaken. A total of 12 recommendations were rated within these three categories: four were rated as highest, three were rated as very high, and five were rated as high. Two additional categories were assigned weight as being useful in resolving certain nursing shortage issues, but, for purposes of this report, these last two categories are listed together as "other."

HIGHEST PRIORITY - The following four recommendations are offered as the highest priority, indicating that, above all others, executive, legislative, or regulatory action should be taken to address these recommendations to:

Establish a statewide nursing curriculum model that provides standardized subjects and sequences among the New Jersey associate degree nursing programs.

Fund a recruitment specialist/marketing person or team to promote nursing in conjunction with, or delegated to, the New Jersey Collaborating Center for Nursing (NJCCN).

Fund and implement a major demonstration project to study the impact of specific nurse-to-patient ratios on patient outcomes in acute care hospitals in those units currently without New Jersey Department of Health and Senior Services (DHSS) mandated nurse-to-patient ratios.

Charge the New Jersey DHSS to extend the regulations on nurse-to-patient ratio standards to include all patient care units, both in hospitals and long-term care facilities.

VERY HIGH PRIORITY - The Council recommends the next three as having very high priority indicating that prompt executive, legislative, and/or regulatory action should be taken. They are:

Subsidize nursing faculty salaries so that they are comparable with health care industry standards for nursing employees with comparable education and experience.

Promote nursing within the one-stop career centers administered through the New Jersey Department of Labor (DOL) and in collaboration with the NJCCN.

Develop a State-supported, defined pension plan system for nurses, similar to that in place for educators, which affords portability and ensures employer contribution.

HIGH PRIORITY - These five recommendations have high priority to:

Institute State sponsored scholarships for nursing students at all levels and loan forgiveness programs for new nursing graduates working in New Jersey.

Provide incentives to employers and academic institutions to establish residency programs to promote the smooth transition of new graduate nurses from academia to service.

Establish a commission to investigate the granting of the Bachelor of Science in Nursing (BSN) degree by community colleges.

Fund an ongoing comprehensive survey of Registered Nurses and Licensed Practical Nurses, administered by the NJCCN, in collaboration with the New Jersey State Board of Nursing, to measure, monitor, and forecast the supply of New Jersey licensed nurses.

Encourage health care facilities to acquire continuing education provider status when the New Jersey State Board of Nursing institutes mandatory continuing education unit requirements.

OTHER PRIORITIES - Finally, the following recommendations are also made to the Governor. They are important, and the Advisory Council members agreed to report them to the Governor without a ranking status:

Establish a State fund to provide subsidies through the New Jersey DOL to employers who create nursing work-study programs for their non-nurse employees and assist the employers in providing the salaries and benefits for the employee.

Provide subsidies for institutions to establish mentorship programs for new nurses in order to support and encourage new nurses to continue practicing in New Jersey.

Provide funds for ongoing skills/needs assessment and employment vacancy profiling for nursing to the New Jersey DOL.

Provide incentives to employers to create and implement work-study programs that offer tuition, full-time salary, and full-time benefits combined with flexible part-time hours for nursing students who are also employees of the health care organization.

Provide scholarships for New Jersey resident students who pursue nursing education out-of-state and commit to working as nurses in New Jersey for two years upon completion of their education.

Provide incentives to institutions to develop residency programs to promote the smooth transition of nurses across service settings.

Require vocational schools to establish partnerships with community colleges and universities that enable students to receive college credits for general education courses, e.g., physical and social sciences.

Create a joint marketing initiative between the New Jersey DOL and health care entities, including educational institutions, providers, professional organizations, and unions focusing on all types of nursing programs.

Create a State-funded nurse corps to include models, such as *Prosperity New Jersey,* for potential nursing students to partner with health care organizations to provide funds for their nursing education.

Require the Commission on Higher Education to expand Equal Opportunity Fund (EOF) programs specific to nursing, e.g., the existing Rutgers EOF Nursing Program.

Require the New Jersey Department of Education to expand programs specific to nursing, e.g., the New Community Corporation.

Establish regulations supporting a no-tolerance policy on violence against nurses.

Establish third-party reimbursement provisions for safety escort services for nurses providing home care in areas where escort services are required.

Charge the New Jersey DHSS to collect and analyze annually data that correlate patient care outcomes with staffing level patterns and skills mix.

Provide reimbursement to Home Health Agencies to extend nursing care through the use of tele-health visits to replace traditional home visits, where appropriate.

Support a mandate to require system-wide adoption of information technology that reduces redundancy in documentation and promotes error reduction in health care organizations.

In order to eliminate duplication in documentation, mandate that all health care agencies/providers establish Medicare documentation guidelines/requirements as the standard for documentation.

In Conclusion - Without thoughtful, concerted action, New Jersey is likely to experience a critical shortfall of nurses in the very near future, which New Jersey can ill afford. Our State can protect the health status of all its residents by the careful consideration and implementation of the most critical recommendations. With prompt action, New Jersey may serve as a model for other states grappling with similar issues as part of this severe national nursing shortage.

Chapter I: Introduction to the Report

New Jersey is experiencing a nursing shortage that projections reveal will intensify as the demand for health care increases with the aging of the baby boom generation, increased technology, and shortened lengths of stay in hospitals. The impending retirement of the largest cohort ever of practicing nurses will result in an ever-widening gap between the number of available nursing positions and the number of qualified nurses willing to fill them. Although the current shortage began with the cyclical nature of supply and demand, a combination of additional factors foresees a sustained shortage for the future. The U.S. Department of Health and Human Services (U.S. DHHS, 2002) predicts that by 2020, New Jersey will experience a gap between supply and demand for Registered Nurses (RN) of 37,529 vacant positions, meaning that 43% of the RN workforce positions will be unfilled. Although comparable data are not available for Licensed Practical Nurses (LPN), the New Jersey Collaborating Center for Nursing reports indicate an early shortfall of 17%, or 3,786 unfilled LPN positions, by 2006. Unless long-term strategies are put in place to stabilize the nursing workforce, New Jersey's ability to provide health care for its citizens will be seriously jeopardized.

Within the context of a growing nursing shortage, the then-Acting Governor John Bennett established the Advisory Council for the Promotion of the Profession of Nursing in New Jersey (the Council), through Executive Order 139 (2002). The Council's charge (Appendix A) was to assist the Governor in proposing legislation by developing recommendations based on the following objectives:

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>
> Evaluate mechanisms currently available in the State and other states that are intended to enhance the education, recruitment, and retention of nurses in the workforce.

By executive order, the Council is composed of five non-voting ex-officio members, appointed by the Governor, which include the Commissioners (or their designees) of Health and Senior Services, Human Services, Education, and Labor, and the Executive Director of the New Jersey Board of Nursing; plus seven public members, appointed by the Governor, including: one nurse each, representing the New Jersey State Nurses Association and the Licensed Practical Nurses Association of New Jersey; two nurses recommended by the Organization of Nurse Executives of New Jersey; and one nurse educator each, from an associate degree nursing program, a baccalaureate program, and a diploma school. In addition, the President of the Senate and the Speaker of the General Assembly each appointed two members who were of different political parties and actively involved in nursing service. From among the nurse members, co-chairs were elected by members of the Council—one representing nursing education and the other nursing service.

The Council met nine times, from December 2002 through January 2004. During its meetings, the Council heard presentations from experts in nursing education, nursing service, educational accreditation, and pension plans. In addition, the Council held three public hearings on solutions to the nursing shortage, according to the three objectives of the Executive Order.

The Council recognized that two health care issues are paramount in this nursing shortage: the lack of sufficient funding for health care, and patient safety. Health care organizations' responses to the

introduction of managed care and the funding reductions in the Balanced Budget Act of 1997 were the impetus; a nursing shortage and concerns about patient safety followed shortly thereafter. Some of the usual fixes for a nursing shortage, such as the use of agency, per diem, traveling or foreign nurses, contribute mightily to the cost of health care and to the issues of a safe practice environment. High turnover and continual orientation of new employees add to a higher nursing budget and less safe practice, as well as having a negative impact on the stability of the nursing workforce.

The recently released Institute of Medicine's (IOM) comprehensive study of the role of nursing in maintaining a safe health care environment is well documented in *Keeping Patients Safe: Transforming the Work Environment of Nurses* (2004). This substantial work follows the Institute's 2000 study, *To Err is Human,* which cited that as many as 98,000 hospitalized Americans die each year as a result of errors in their care. Furthermore, in the 2004 document, the IOM reported that "a study of medication errors in two hospitals over a 6-month period found that nurses were responsible for intercepting 86 percent of all medication errors made by physicians, pharmacists, and others involved in providing medications for patients before the error reached the patient" (p. 3). What will happen to New Jersey residents if the nurses are not there to care for them in sufficient number, with sufficient education and orientation to the facility and its patients?

The work of the Council began by building on a conclusion of the IOM (2004) study that how well people are cared for by nurses affects their health and at times can be a matter of life and death—something nurses have always known and valued. As the Council began its deliberations, the members sought answers to the implications of a shortage and the types of solutions needed to ensure that an adequate and well-trained nursing workforce would be there to care for New Jersey's residents.

This report represents the outcomes of the dialogue, the listening, the sharing of information, the deliberations, and the collaboration among the Council members. Each of the substantive chapters begins with a review of the literature documenting issues and solutions, continues with a thematic analysis of the testimonies at the three public hearings, and summarizes the presentations of the experts invited to address the Council. Lastly, these chapters contain the recommendations in relation to Nursing Education (Chapter IV); Recruitment of Nurses (Chapter V); and Retention of Nurses in the Workplace (Chapter VI).

This introduction (Chapter I) is followed by a description of the Assessment Activities of the Council (Chapter II), and the Implications of a Nursing Shortage (Chapter III). As outlined above, the remaining sections of the report detail the Council's recommendations on education, recruitment, and retention of the nursing workforce. The report ends with a concluding chapter (Chapter VII).

Chapter II: Assessment Activities of the Council

Public hearings

As part of its charge, the Council held three public hearings to collect information on suggested solutions to the nursing shortage. The hearings were held during February and March of 2003 in Atlantic City, Princeton, and Bergen County. Specifically, participants were asked to provide their views on: (1) the current and long-term implications of the growing shortage of nurses in the State; (2) how to improve the education, recruitment, and retention of nurses; and (3) mechanisms available in New Jersey and other states that enhance the education, recruitment, and retention of nurses in the workforce. These data were analyzed using content analysis and theme extraction and were presented to the Council at its meeting in September 2003. The results are included in the following sections of this report.

Presentations

The Council heard presentations in October 2003 from experts in nursing education and nursing service. Presentation topics are identified in the following table, while summaries are presented in the following chapters of this report.

Council Charge	Presenter/Credentials	Topic
Enhancing the education of nurses	Delores Sands, Dean, University of Texas School of Nursing, Austin	Nursing education finances, the Texas Core Competency Model
Enhancing the education and retention of nurses	Margaret McClure, Professor, New York University	Nurse to patient ratios, nursing education
Enhancing the education of LPNs	Helen Larsen, Director, National Association of Practical Nursing Education and Practice	Trends in practical nursing education and practice
Enhancing the education of nurses	Barbara Grumet, Director, National League for Nursing Accreditation Commission	Trends in nursing education
Enhancing the retention of nurses	John Abraham, Representative, American Federation of Teachers	Pension plans
Enhancing the education of nurses	Chris Tanner, Director, Undergraduate Program, Oregon Health Sciences University	Oregon Education Model
Enhancing the retention of nurses	Karen Stefaniak,Chief Nursing Officer, University of Kentucky Hospital	Nurse to patient ratios
Nurse staffing ratios	Marilyn ChowChief Nursing OfficerKaiser Permanente Health Care System	The evolution of the nurse staffing ratios in California and the implementation in one large health care system

Council deliberations on recommendations

The Council began deliberations on final recommendations in December 2003. The technique used to bring investment and consensus by the Advisory Council was process driven. Expanding on the skills gleaned from total quality management training (3M Health Care update), the facilitator introduced the Council to two steps to set priorities that were evidence-based, and thus defensible, legislative recommendations as mandated by Executive Order 139.

Generating a large number of creative, freethinking ideas without criticism or evaluation began the session of "brainstorming." Moving around the group, everyone present was provided the opportunity to contribute while the facilitator recorded ideas, moved members to continue building, and encouraged the development of even better ideas. The group was reminded to remain cognizant of the critical issues that would assist or deter the implementation of the desired changes suggested.

The next step in the process, nominal group technique, enabled the Advisory Council to reach consensus. Designed to allow 100% participation and dissuade individual domination, the Council was provided another brainstorming session that allowed for clarification. This discussion established uniform understanding on the part of all participants and the potential consolidation or grouping of ideas. The Council was then asked to select top choices from the suggested possibilities after agreeing that the end product would include the recommendations brought forward. The recommendations were then rank-ordered by each member of the group. With a numerical value placed on each vote, the Council's scores were tallied and priorities were determined from among the recommendations. This resulted in 29 priority recommendations with 12 in the three highest groupings: high, very high, and highest priority.

Chapter III: Implications of the Nursing Shortage

Introduction

Nursing personnel (registered nurses, licensed practical nurses, and nursing assistants) represent the largest component of the health care workforce. Approximately 54 percent of all U.S. health care workers are licensed nurses and their assistants. These include 2.2 million RNs, 683,800 LPNs, and 2.3 million nursing assistants, who together provide health care to individuals in all settings in which health care is delivered—in hospitals, long-term care facilities, ambulatory care (clinics, physicians' offices), workplaces, and homes (Snyder, 2003). In most of these settings, nursing personnel have the most contact with patients compared to other health care workers. The importance of nursing personnel to patient health and safety cannot be overemphasized. In fact, the Institute of Medicine (2004) reported that, "Efforts to detect and remedy error-producing defects in health care systems will be severely constrained without the assistance of the eyes, ears, cognitive powers, and interventions of over half the health care workforce" (p. 32). In this section of the Council's report are presented the demographics of the New Jersey nursing workforce, the projections on supply and demand for New Jersey nurses, and relevant research literature on nursing's relationship to safety and the quality of health care in the midst of unsettling predictions about the future supply of nursing personnel. Additionally, the testimony at the three public hearings related to the implications of the nursing shortage is summarized.

New Jersey Registered Nurses

Broadly conceived, nursing personnel consist of RNs, LPNs, and nursing assistants, who may be certified (CNAs) or Home Health Aides (HHAs) or unlicensed assistive personnel (UAPs). This section describes the demographics of the New Jersey RN workforce.

Registered nurses work in every conceivable setting and the home, providing care across the health-illness continuum to people of all ages. RNs may be educated at the diploma, associate, baccalaureate, master's, and doctoral levels in nursing and may be certified in the specialized care of patients, such as pediatrics, oncology, or geriatrics. The most recent information about New Jersey RNs comes from a 2002 random sample of 17,500 of the 104,468 actively licensed New Jersey RNs conducted by the NJCCN and the New Jersey State Board of Nursing. The response rate for this survey was 74 percent, yielding a sample of 12,930 RNs (Dickson, 2003b). These findings are summarized in the next few paragraphs and are compared with the findings of the 2000 National Sample Survey (NSS), which contains data about the national nursing workforce (Spratley, Johnson, Sochalski, Fritz, & Spencer, 2000).

A primary factor in the forecasts of the supply of RNs is related to the aging of the nursing workforce. New Jersey RNs are aging, like the general population of RNs, although New Jersey RNs are older on average. In 2002, the average age of New Jersey RNs was 48.0, and the average age of RNs in the 2000 NSS was 45.2. The average age of New Jersey RNs working in nursing full-time (45.8), and part-time (47.5), compares with the national average of 41.8 for employed nurses. In 2000, 9.1 percent of nurses nationally were age 30 and younger, while in New Jersey 5.5 percent were 30 and below. Additionally, 94.7 percent of the youngest New Jersey RNs were employed in hospitals, and slightly over 52 percent devoted 100 percent of their time to taking care of patients. The higher average age of the New Jersey RN is an indication that fewer younger people are choosing nursing as a career, are older when they enter nursing, and/or are leaving nursing prematurely. Given that the health care setting chosen by the vast majority of new graduates is in direct care and in hospitals, this decreasing proportion

of younger nurses may indicate a critical shortage of nurses caring for hospitalized patients in the future (Buerhaus, Staiger, & Auerbach, 2003; Dickson, 2003b; Spratley et al., 2000).

Nurses continue to be predominantly female. In New Jersey, the overwhelming majority (96.6%) of RNs are female. Likewise, national figures reveal that 94.6 percent of RNs are women (Dickson, 2003b; Spratley, et al., 2000).

As indicated above, RNs may receive their initial pre-licensure education in five different levels of education—diploma, associate degree, baccalaureate, master's, and doctoral. In addition, once nurses obtain their initial pre-licensure education, they may choose to advance their education through to the doctoral level and beyond with post-doctoral fellowships. New Jersey RNs differ in initial nursing education from the national snapshot in that New Jersey has a higher percentage of RNs holding the diploma and a lower percentage of nurses with baccalaureate degrees. In New Jersey, 41 percent of RNs obtained their basic pre-RN licensure education in diploma programs, 31 percent were graduates of associate degree programs, and 27 percent earned the baccalaureate degree. Thirty percent of the NSS respondents entered the profession with a diploma or a baccalaureate degree in nursing, while 40 percent entered with an associate degree in nursing.

Although initial education is important, of even greater significance is the percentage of nurses who pursue additional education in nursing, especially at the graduate level where nurses are eligible for advanced practice and faculty positions. New Jersey exceeds the national percentages of nurses holding baccalaureate, master's and doctoral degrees. Forty percent of New Jersey RNs currently hold baccalaureate degrees in nursing, 9.9 percent have master's degrees, and 0.7 percent have a doctorate. In the National Sample Survey of RNs, 32.7 percent had a baccalaureate as their highest educational preparation for nursing; the percentage of RNs with a master's or doctoral degree was estimated at 9.6 percent and 0.6 percent respectively (Spratley, et al., 2000). Seven percent of New Jersey RNs started their nursing education with a practical nurse education (Dickson, 2003a).

Given the shortage predictions, data indicate that increased RN workload associated with under-staffing may be linked with increased intentions to leave direct patient care or nursing entirely. The next few paragraphs summarize a sample of surveys investigating nurses' perceptions of staffing and intentions to stay in nursing. In an online survey of 7,300 RNs seeking information on perceptions of changes in nursing practice in the preceding two years, the American Nurses Association found that 56 percent of those completing the survey believed that their time available for direct patient care had decreased. An overwhelming number of respondents (5,560 or 76%) stated they had experienced increased patient care loads. Furthermore, the respondents indicated their belief that patient care declined as a result of inadequate staffing (51%), decreased nurse satisfaction (45%), and delays in providing basic care (42%). Although the majority of respondents indicated that they planned to remain in nursing 10 years or more (76%), 45 percent indicated they intended to leave their present positions within the next year (American Nurses Association, 2001).

The NJCCN 2002 New Jersey RN Survey queried nurses about their intentions to leave their principal nursing positions within 12 months. Twenty-eight percent indicated that they were very or somewhat likely to leave, and the majority (52.1%) indicated that they were unlikely to leave. The major reasons cited for the intention to leave were dissatisfaction with their assignment (25.2%) and dissatisfaction with their salary (23.5%) (Dickson, 2003b).

The National Sample Survey of RNs (Spratley, et al., 2000) sought information on levels of job satisfaction. Just over two-thirds (69.5%) reported being satisfied with their current position. Although this figure

represents a majority of respondents, data from the General Social Survey of the National Opinion Research Center indicate that from 1986 through 1996, 85 percent of workers in general and 90 percent of professional workers expressed satisfaction with their jobs (cited in NSS, original citation 1/National Opinion Research Center, "General Social Survey, Data Information and Retrieval System," 15 March 1999).

New Jersey Licensed Practical Nurses

Like RNs, LPNs are employed across all health care settings and work with patients of all ages. No national data are gathered on LPNs; hence, comparison with New Jersey's data is not possible. In 2002, there were approximately 20,000 actively licensed LPNs in New Jersey. The New Jersey State Board of Nursing and the NJCCN conducted a random sample survey of 1,900 actively licensed LPNs. A total of 1,213 responded for a return rate of 63.8 percent (Dickson, 2003a). The next few paragraphs summarize the results of this survey.

In many respects, the demographics of the New Jersey LPN workforce resemble the RN workforce. The average age of New Jersey LPNs surveyed was 47.8 years. Similar to RNs, fewer than 6 percent (5.1) of the LPNs were less than 30 years old. The majority of respondents, 64.1 percent, were between 40 and 60 years old, and the overwhelming majority were female (96.2%) (Dickson, 2003a).

In New Jersey, the majority of practical nursing (PN) education is offered in vocational technical programs. In addition, two community colleges and one hospital also offer PN programs, and two proprietary PN schools recently opened. The majority of New Jersey LPNs (71.7%) graduated from a vocational technical program, 19.4 percent from a hospital school, and 7 percent from a community college program. Fourteen percent of respondents stated that they were currently enrolled in RN programs (Dickson, 2003a).

Nationally, LPNs form the backbone of the licensed nursing workforce in nursing homes and long-term care facilities, and New Jersey is no different. The highest percentage (35.0%) of LPNs were employed in nursing home/extended care and long-term care facilities. Almost 15 percent worked in physician practices, and 15 percent worked in various settings within hospitals, including inpatient and ambulatory care (Dickson, 2003a).

About a third of the LPNs stated that they were likely to leave their current principal positions of employment within the next 12 months. Of these, 26 percent indicated dissatisfaction with their salary, and 19 percent cited dissatisfaction with their job assignment. Other reasons for leaving included retirement (15%), family/personal leave (8%), returning to school (8%), and "other" (25%) (Dickson, 2003a).

The supply of nurses in New Jersey

Supply is an economic term that refers to the number of nurses licensed to practice, or eligible for licensure, in a particular state. Therefore, the supply consists of the number of nurses in the labor market, those who can enter the labor market (e.g., licensed but not working in nursing), and those in the educational pipeline nearing entry into the market (Prescott, 2000). In 2001, there were 104,468 actively licensed RNs and about 20,000 LPNs in New Jersey (Dickson, 2003b). According to the NSS of RNs (Spratley et al., 2000), the RN-to-population ratio in New Jersey is 800 employed RNs per 100,000 population. This is higher than the U.S. nurse to population ratio, which is 782 per 100,000 population; New Jersey ranks 29th in the 51 jurisdictions in the survey (50 states and the District of Columbia). Ratios of nurses to population are one measure of nurse supply, but they do not reflect geographic distribution and the knowledge and skill sets of the RNs or the health care needs of the population.

The demand for nurses in New Jersey

Demand refers to the quantity of goods or labor that employers can and will purchase at a specific wage rate and time, given their competing demands for resources and alternative choices (Prescott, 2000). When supplies of a valued entity are low, the demand rises. Consequently, when decreasing numbers of nursing enrollments and graduations in New Jersey continued from 1994 until 2001, the demand for nurses rose. This was reflected in increased salary, fringe benefit packages, and other recruitment offers. The increased wages and the general softness of the economy have made a difference in the reported hospital vacancy rates; over 50% of the New Jersey nursing workforce is employed by hospitals. One way to measure demand is by the vacant positions that employers would fill, given the availability of labor. The most recent hospital vacancy rates reported by the New Jersey Hospital Association (NJHA) indicate a New Jersey hospital vacancy rate from July-December 2003 of 8.4% for RNs and 5.76% for LPNs (B. Tofani, personal communication, June 23, 2004). These hospital rates are consistent with the 2003 national hospital vacancy rates reported by the American Hospital Association of 8.4% for RNs and 7.0% for LPNs (S. McLain, personal communication, May 5, 2004). Surveys of 2003 national nursing employers by the National Association for Health Care Recruitment (2004) and the Bernard HODES Group (2003) report vacancy rates for RNs of 14.6% and 13.9% respectively.

A recent study reported by Buerhaus et al. (2003) also indicates an increased employment by hospitals of RNs; from 2001 to 2002 hospital employment of RNs increased by approximately 100,000. However, 66% of those 100,000 additional RNs were nurses over the age of 50 and another 32% of the RN positions were filled by foreign-born RNs (total 95%). As a result of their research, Buerhaus et al. concluded “that RNs over age fifty and foreign-born RNs account for practically all of the increase in RN employment in hospitals in 2002” (p. 194). The question then remains who will fill the increased demand for nurses when baby boom nurses begin to retire?

As the demand for nurses was rising, nursing leaders in many New Jersey hospitals advocated for changes in the work environment for nurses that would lead to retention of nurses. The Magnet Nursing Service Recognition Program of the American Nurses Credentialing Center is a voluntary form of external professional nurse peer review available to all hospitals and nursing homes. The program is based on established standards of nursing care and nursing services administration (McClure & Hinshaw, 2002). New Jersey has 15 magnet hospitals, more than any other state in the nation (American Nurses Credentialing Center, 2004).

In February 2004, the NJCCN published an updated fact sheet on nursing in the State (Dickson, 2004). By all indicators, the demand for nursing continues to rise in New Jersey. For example, the number of staffed hospital beds has decreased significantly in the past decade, while the demand for hospital RNs has continued to increase. The rise in demand for RNs is a reflection of the increased severity of illness of hospitalized patients, the aging of the population, the increased use of life-extending technology, a rapid turnover of hospitalized patients, and decreased hospital lengths of stay.

Predicting the gap between the supply and demand for nurses in New Jersey

Despite the recent increase in enrollments and graduations, the demand for nurses is expected to increase above and beyond the supply of nurses in New Jersey for the foreseeable future. The National Center for Health Workforce Analysis predicted that by 2020 the gap between the supply of, and demand for, RNs in New Jersey would approximate 43 percent or 37,519 RN positions unfilled (U.S. DHHS, 2002). Much of the gap will be due to the retirement of the baby boomers who form the largest cohort of RNs, with no large cohort of RNs to replace them. The increase in demand also is related to the aging

population and their associated health care needs, as well as to the increased use of technology and new medical treatments in health care.

The NJCCN developed a forecasting model (Model) that predicted the demand for New Jersey RNs/LPNs in 2006. The increased demand of 11,000 RNs predicted by the Model results in a demand for the total workforce of 74,400 RNs in 2006. At the same time, the Model forecasts an additional 4,000 LPN positions, which results in a demand of a total LPN workforce of 24,000 in 2006. On the other hand, supply findings indicate that the supply of RNs will be about 60,600 by 2006, with the LPN supply remaining at about 20,000. Putting together the supply estimates with the demand forecasts results in a prediction of 14,000 unfilled RN positions, or 18% of the total RN workforce. Using the same predictive technique for the New Jersey LPN population results in a forecast of nearly 24,000 LPN positions in 2006, i.e., 4,000 unfilled LPN positions or 17% of the LPN total workforce (Dickson, 2002).

In 2003, approximately 1,480 candidates graduated from all New Jersey entry-level RN programs. Even if that figure were to continue to increase slightly for the next three years and there were no increases in retirements or other losses of nurses, New Jersey would fail to fill this projected gap between the supply and demand for RNs and LPNs in 2006 (Dickson, 2002). Furthermore, the national figures point to an ever-widening gap in the supply and demand for RNs by 2020 (U.S. DHHS, 2002).

The roles and functions of nurses

The data on supply, demand, and projections for nurses in New Jersey are revealing and alarming. Nurses are frequently the link between positive and negative patient outcomes. The roles and functions of nurses and a summary of research linking nursing care with increased positive patient outcomes are presented in the next few paragraphs.

Helping patients recover, preventing illnesses, and promoting health are three primary functions of nurses and their assistants. Nurses accomplish these functions through interventions such as educating patients about their treatments and conditions, activities designed to prevent complications after surgery, helping patients compensate for loss of functioning, providing emotional support, educating patients and families; and performing a wide array of measures designed to determine patients' health status, such as vital signs, pain assessment, and pulse oximetry. Nurses also implement the medical treatment plan such as administering medications, monitoring the effects of medications, and assessing and treating wounds.

A primary and crucial function of nurses is to provide ongoing surveillance (also known as assessment, evaluation or monitoring) of patients. If a patient's condition begins to decline or shows signs associated with complications, nurses detect the signs and institute actions to prevent further decline. Surveillance requires attention, knowledge, and responsiveness on the part of the nurse. Nurses seek information about patients' progress through observational skills directed at the patients themselves, by assessing blood pressure and cardiac functions, fluid intake and output, blood chemistry values, pain, and other parameters available through high technology monitors in many health care settings.

While performing these assessments, nurses are linked directly to the patient, a vigilance function that has been described as the "front-line" of patient defense (Joint Commission on Accreditation of Health Care Organizations, 2001). Studies of organizations with strong track records of high reliability and safety have shown that vigilance by front-line workers is essential for detecting threats to safety and potential complications prior to their occurring (Roberts, 1990; Roberts & Bea, 2001).

When surveillance fails, patients are at higher risk of adverse events. If nurses are unable to assess patients adequately, a decline in patients' conditions follows, and "failure to rescue" is the likely outcome. Failure to rescue is said to occur when actions are not initiated that would reverse a patient's decline (Aiken et al., 2002). Further, surveillance is associated with the prevention of medication errors. In a systems analysis of 334 medication errors associated with 264 preventable adverse events occurring in two hospitals over a 6-month period, researchers found that nurses were the health care personnel most likely to intercept potential errors before the errors resulted in adverse events (Leape, Bates, Cullen, Cooper, Demonaco, Gallivan, et al., 1995).

Failure to rescue is reduced when the mix of nursing personnel contains higher numbers of licensed nurses (Aiken, et al., 2002; Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002). Nurse staffing was found to be consistently related to five medical patient outcomes—urinary tract infections, pneumonia, length of stay, upper gastrointestinal bleeding, and shock. Overall, stronger evidence of an association between patient outcomes and RN share of total staffing was found when compared to the evidence linking patient outcomes to levels or mix of LPNs or nursing assistants. Higher RN staffing was associated with a 3 to 12 percent reduction in the rates of patient outcomes potentially sensitive to nursing (Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2001). In hospitals with high patient-to-nurse ratios (more patients for nurses to care for), surgical patients experienced a higher risk-adjusted chance of dying in the hospital or of dying within 30 days of preventable complications (Aiken, Clarke, Cheung, Sloane, & Silber, 2003). Further, in these hospitals with higher patient-to-nurse ratios, nurses are more likely to experience burnout and job dissatisfaction (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002).

In addition to providing surveillance, therapeutic nursing interventions, and treatments in the medical plan of care, nurses serve as coordinators of patient care. Coordinating functions include planning for patients' discharge to home or transfer from one facility to another, assuring that treatments and tests are performed by members of the health care team, and other indirect care activities. The coordinating functions of nurses are described by Lewis Thomas, a physician and chief executive officer of Sloan-Kettering Institute, who was hospitalized when he made this observation:

> One thing the nurses do is to hold the place together. It is an astonishment, which every patient feels from time to time, observing the affairs of a large, complex hospital from the vantage point of his bed that the whole institution doesn't fly to pieces. A hospital operates by the constant interplay of powerful forces pulling away at each other in different directions, each force essential for getting necessary things done, but always at odds with each other. . . . My discovery, as a patient . . . is that the institution is held together, glued together, enabled to function as an organism, by the nurses and nobody else (Thomas, 1983, pp. 66-67).

Against the backdrop of what nurses actually do to keep patients from becoming sicker and help people stay well are the changes in the health care environment that are creating stress and strain on nursing personnel. For nurses employed in hospitals and long-term care facilities, these include more acutely ill patients; shorter stays, especially in hospitals; redesigned work; changes in the deployment of nursing personnel to care for patients; frequent patient turnover; staff turnover; long work hours; and increased interruptions and demands on nurses' time (IOM, 2004).

More acutely ill patients. Beginning in the mid-1980s, following implementation of the Medicare prospective payment system for hospitals, more acutely ill patients were admitted to hospitals, and other less acutely ill persons were either treated at home or in ambulatory care settings. More acutely ill patients require more nursing care, both in terms of hours of direct care and knowledge and skill of the nurse providing

the care. The increase in severity of illness of hospitalized patients has had a ripple effect throughout the health care industry. As patients become more stable but are still quite acutely ill, they are transferred to other settings, including long-term care facilities or home. As a consequence, long-term care facilities have developed specialized units to care for patients needing more extensive care and thus more skilled nursing personnel. In addition, home health care requires the expertise of highly skilled RNs who are often caring for patients who 10 to 15 years ago would have been hospitalized in intensive care units (IOM, 2004).

Shorter hospital stays. From 1980 to 2000, the average length of stay for hospitalized patients declined from 7.6 to 5.8 days (American Hospital Association, 2002). For nurses, decreased lengths of stay mean more intensive nursing care that is administered to patients whom nurses are not likely to get to know during the shorter stay. Shorter lengths of stay also transfer the risk for adverse events from the hospital to the next setting to which the patient is transferred, including the home. Sicker patients going home sooner are more likely to develop events that are less readily detected (IOM, 2004).

Redesigned work. Around the same time that the Medicare prospective payment system was implemented, hospitals experimented with increasing the efficiency of the nursing staff to reduce expenses. Such redesign included personnel reductions, cross-training of personnel to perform additional duties or provide care in unfamiliar units; reassignment of support services; and training and use of multi-skilled non-nurse workers to perform activities such as bed making, patient baths, positioning of patients, obtaining blood, and performing electrocardiograms. As a result of redesigned work initiatives, the workers reported increased role conflict and ambiguity (Ingersoll, Fisher, Ross, Soja, & Kidd, 2001; Walston, Burns, & Kimberley, 2000).

Changes in deployment of nursing personnel to care for patients. Accurate data about the numbers of nursing staff available to care for patients in health care facilities are not easily available, However, an analysis of national hospital staffing data from 1981 through 1993 revealed that total nursing personnel per 1,000 adjusted patient days, and adjusted for case mix, declined nationally by 7.3 percent (Aiken, Sochalski, & Anderson, 1996). A follow-up study of RN staffing between 1990 and 1996 found that the number of hospital RNs increased nationally by 15 percent. During that same period, however, LPN full-time equivalent positions decreased by 14 percent (Kovner, Jones, & Gergen 2000). Health services researchers continue to find a strong association between nurse staffing in the aggregate and the prevention of adverse events in hospitals and long-term care facilities. Hence, declines in the absolute numbers of nursing personnel in facilities are cause for concern (IOM, 2004).

Frequent patient turnover. Patient turnover, the number of actual patients who occupy a patient bed in a 24-hour period, has increased as the numbers of hospital beds have declined and patients experience shorter lengths of stay. Increased patient turnover continues to increase workload for hospital nurses (IOM, 2004).

Staff turnover. High rates of turnover can have adverse consequences for patient safety as well as staff morale, quality of patient care, and eventually staff shortages. Turnover rates in long-term care facilities are high. For example, in 2001 the American Health Care Association found turnover rates for nursing assistants averaged 78 percent, 56 percent for RNs, and 54 percent for LPNs. At the same time hospital turnover rates in 2001 ranged from 10 to 30 percent (IOM, 2004).

Long work hours. Nursing staff in hospitals and long-term care facilities report working increasing numbers of hours beyond the traditional 8-hour shift. Reasons include desire for increased compensation, requirements of facilities to work overtime to make up for staffing shortages, and a preference for flexible

work hours. In a sample of staff nurses, the majority (84.3 percent) of scheduled shifts were 8 or 12 hours in length, and 3.5 percent were for periods longer than 12 hours (Ann Rogers, University of Pennsylvania, unpublished data cited in IOM, 2004). In 17 long-term care facilities, double shifts were performed on a regular basis. In 13 of the facilities, at least one nursing staff member had worked between four and seven double shifts within the past seven days of the survey (Center for Medicare and Medicaid Services, 2002).

Increased interruptions and demands on nurses' time. Evidence indicates that a large proportion of nurses spend time performing activities that disrupt their primary patient care responsibilities. These include delivering and retrieving food service trays, performing housekeeping duties, transporting patients, and ordering or coordinating ancillary services (Aiken, Clarke, Sloane, Sochalski, Busse, Clarke, et al., 2001; Prescott, Phillips, Ryan, & Thompson, 1991; Upenieks, 1998). In addition, documenting nursing work and activities to meet the requirements of hospitals and state and federal agencies imposes a heavy demand on nurses' time. These include insurance certifications, obtaining permission for release of records, nursing and medical treatments, and nursing assessments. Nurses working in home care are especially burdened with a federally required assessment instrument known as OASIS for each Medicare beneficiary receiving Medicare home health care services. Paperwork and documentation lessen the time that nurses have available to care for patients. Completion of paperwork has been cited as one reason nurses work overtime (Trossman, 2001).

Summary of testimony at public hearings

In the three public hearings, 23 participants directed their statements toward the implications of the nursing shortage. Of those statements, the majority (17) were directed toward concerns about safety and quality of care should the shortage persist and worsen. Participants stated that delays in treatment would occur, which could have a negative impact on quality of care. More importantly, participants indicated their concern for safety and the potential for increased adverse patient outcomes, such as falls, medication errors, and complications from surgery.

The remaining statements reflected what participants believed would be the impact of a continuing shortage on nurses themselves. When there are an insufficient number of nurses providing care, the participants stated, those nurses remaining burn out more quickly and resign from their positions. In addition, high stress and burnout may be associated with an increase in union activity. Regardless, these individuals said, when nurses leave, those remaining are faced with greater chances of making errors, thus contributing further to adverse patient outcomes.

Chapter IV: Nursing Education

Introduction

New Jersey has a rich and varied array of nursing education programs. The schools of nursing include 23 practical nurse (PN) programs and 40 registered nurse (RN) programs in 11 diploma schools, 13 associate degree (AD) programs, and 16 baccalaureate (BSN) programs.

Nine of the 16 BSN programs offer traditional four-year programs and RN-to-BSN programs for nurses with associate degrees or diplomas in nursing, and seven offer only RN-to-BSN programs. In addition, four programs—Rutgers-Newark, the University of Medicine and Dentistry of New Jersey (UMDNJ), Seton Hall University, and Fairleigh Dickinson University—offer accelerated second-degree BSN programs for students with non-nursing baccalaureate degrees. Eleven offer graduate education in nursing (College of New Jersey; Fairleigh Dickinson University; Felician College; Kean University; Rutgers, The State University of New Jersey; Monmouth University; Richard Stockton College; Saint Peters College; Seton Hall University; UMDNJ; and William Patterson University). Rutgers and UMDNJ offer doctorates in nursing and urban systems, respectively.

In addition to the four-year colleges and universities, RN pre-licensure programs are located in community colleges and hospital-based diploma programs. Thirteen community colleges offer an associate degree in nursing. Their counties primarily support all of the community colleges, with 10 percent of their budget coming from State funds.

Eleven hospitals/health systems operate diploma programs, with most offering general education courses through, or in cooperation with, community colleges. Hospital programs are privately funded. A listing of all nursing programs can be found in Appendix B.

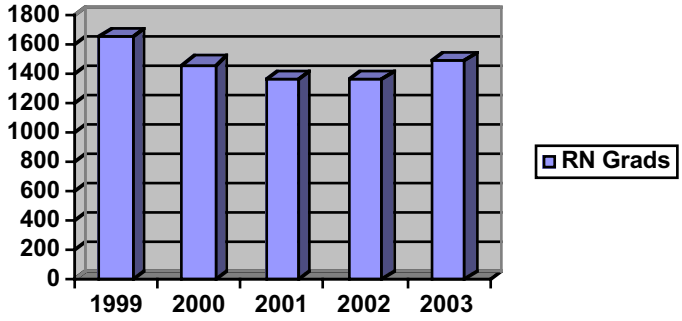
Of the 23 PN programs in New Jersey, 18 are offered in the State vocational-technical system. One is located in a hospital, two are in community colleges, and two are recently created proprietary school programs. All of the New Jersey PN programs are post-secondary education.

Trends in nursing education

In 2003, the number of entry-level nursing graduates totaled 1,480; a modest 7% increase from 2002. Figure 1 depicts trends in nursing graduates from 1999 to 2003. The number of graduates in 2003 remains below that of entry-level nurse graduates in 1999, although data indicate that there is an increased interest in nursing and schools are operating above their capacity. Furthermore in the fall of 2003, 1,621 qualified RN students were denied admission because the New Jersey schools were at or above capacity (Dickson, Flynn, & Beal, 2004a).

Figure 1

Trends in NJ Nursing School Graduations



Source: Dickson, Flynn, & Beal, 2004a

Due in part to increasing interest in nursing education, faculty capacity is fast becoming a problem in New Jersey. In 2004, 48 percent of RN schools reported faculty vacancies. Fully half of the schools reported difficulty filling nursing faculty positions. However, many schools reported operating above capacity with limited resources to hire additional faculty. These figures are consistent with faculty shortage problems across the nation. The American Association of Colleges of Nursing (AACN) reported on faculty shortage issues that include aging of the faculty, fewer younger persons choosing nursing education as a career, and fewer educationally qualified nurses to enter academe (AACN Task Force on Future Faculty, 2003). In addition, faculty salaries have not kept up with salaries offered to nurses in the private sector, further exacerbating a serious supply-side problem in nursing education.

Compounding the need to increase enrollments to narrow the projected gap between supply and demand, 42 percent of all New Jersey RN schools reported budget cuts for the 2003 academic year. Almost 80 percent of the BSN and higher degree programs have been affected by budget cuts, while 40 percent of AD programs and 10 percent of diploma programs have been similarly affected (Dickson, Flynn, & Beal, 2004a).

In order to increase enrollments, New Jersey schools report that they need additional resources. Paramount among all types of RN programs is the need for resources to hire more faculty. Some schools report the need for increased classroom space, clinical sites, and to a lesser extent, laboratories and equipment (Dickson, Flynn, & Beal, 2004a).

With the growing shortage of nursing faculty and the concomitant need to increase pre-licensure nursing enrollments, schools of nursing must produce increasing numbers of nurses prepared at the graduate level to educate nurses. The most recent AACN Survey found that although enrollments increased in both master's and doctoral degree programs, the number of graduates from these programs is declining. Enrollments in master's degree programs nationally rose 10.2 percent (3,350) to a total of 37,251. Doctoral programs experienced a 5.6 percent increase (171 students), bringing the total to 3,229. However, the number of graduates from these programs declined in 2003 by 2.5 and 9.9 percent, respectively. In New Jersey, the number of master's graduates has remained quite constant over the past five years, averaging about 200 graduates per year. However, most of the current master's programs focus on Advanced Practice Nurse preparation and do not offer courses that prepare teachers of nursing. The two State PhD programs for nurses are relatively new with the first graduates in 1995. Since then there were between zero and eight graduates per year.

AACN predicts that the shortage of nurse educators will intensify over the next 20 years as faculty members retire and fewer nurses with advanced educational preparation choose careers in academe. According to AACN projections, between 200 and 300 doctorally-prepared faculty will be eligible for retirement each year from 2003 through 2012, and between 220-280 master's prepared faculty will be eligible for retirement each year between 2012 and 2018. A survey of New Jersey RN nursing schools indicated that by 2008, 50 percent of the State's nursing faculty will be eligible for retirement (New Jersey Colleagues in Caring, 1998).

National data about trends in enrollments in associate degree, diploma, and practical nurse programs are not available at the time of the writing of this report.

Testimony at public hearings

In the regional hearings, participants provided 50 suggestions regarding how to improve the education of nurses in the State. In order, these were categorized as follows: funding (15), curriculum (9), regulation (7), capacity (7), studies/plans (5), faculty (5), and school-to-work transition (2).

Suggestions were provided concerning funding to provide incentives to colleges and universities to increase the capacity of nursing programs. This could be accomplished through raising salaries for nursing faculty and fully funding faculty positions. Another suggestion was to create additional curricular tracks for nurse educators and to provide scholarship funding for people enrolled in these tracks. Participants suggested that schools of nursing be funded to upgrade their facilities. Several suggestions were offered to expand programs by considering joint appointments using clinician/employees who can assist with the education of students in their agencies. Another suggestion concerned offering classes at nontraditional times.

Nine suggestions revolved around curriculum innovation. Some proposed that schools innovate or revise their curricula to better prepare students for the realities of nursing practice. Others were more specific, stating that curricula be tailored to prepare nurses with management and leadership skills, as well as skills in specialty nursing practice.

There were mixed messages regarding the regulation of nursing education. Some of those who testified stated that regulations should remain the same, particularly with respect to minimal educational requirements for faculty. Others expressed the exact opposite sentiment, stating that educational requirements for faculty should be relaxed so that more people could serve as faculty. The current regulations require a Master of Science degree in nursing for faculty in RN programs.

Hearing participants were also asked to share their thoughts on mechanisms available in the State and other states that enhance the education of nurses. They listed nursing scholarships, forgivable loan programs, offering courses on-site at agencies, and offering flexible scheduling to enable employees to attend classes.

Council presentations

In October 2003, Council members heard presentations by experts in nursing education. Dr. Christine Tanner, Undergraduate Director, Oregon Health Sciences University, discussed the Oregon Consortium for Nursing Education and its work on reforming nursing education in Oregon. Dr. Delores Sands, Dean, School of Nursing, The University of Texas at Austin, spoke about the Texas model on differentiated

entry-level competencies of graduates of Texas nursing programs. Barbara Grumet, Executive Director of the National League for Nursing Accreditation Commission (NLNAC), updated the Council on the NLNAC's perspectives on strategies to address the nursing shortage. Helen Larsen, Director of the National Association of Practical Nurse Education and Service, Inc. (NAPNES), presented information on trends in LPN education and practice.

The Oregon Consortium for Nursing Education

In 2001 the Oregon Nursing Leadership Council (ONLC) developed a strategic plan to resolve the shortage of nurses in that state. The first goal of the plan was to double the enrollments in nursing programs by 2004 by enhancing the nursing education infrastructure, developing strategies to maximize the use of all statewide faculty resources, expanding access to health care facilities for nursing clinical education, and creating incentives and rewards for entering nursing students (Oregon Nursing Leadership Forum [ONLF], 2001). To realize the goal, the Oregon Consortium for Nursing Education (Consortium) was created. The Consortium established the following elements: a shared, competency-based integrated curriculum culminating in a bachelor's degree; improved utilization of clinical facilities and faculty expertise through collaborative planning for clinical experiences; joint faculty appointments and shared expertise in instructional design; development and use of clinical simulation laboratories to augment on-site clinical training, making use of shared instructional materials; coherent student support services that facilitate students' financial aid; admission and dual enrollment on the "home" campus and in other participating institutions; and shared purchasing power to equip laboratories, hire consultants for faculty development and other needed areas of support (Oregon Consortium for Nursing Education [OCNE], 2003).

The Consortium curriculum that is being developed is a competency-based curriculum that results in a bachelor's degree with an exit option at the associate degree to provide for RN licensure. Beginning in the fall of 2004, students will be able to dual-enroll at the participating associate degree campuses. Consortium members have reached consensus on the general education requirements that are prerequisite for the nursing major such that students will enroll in a standardized pre-nursing curriculum. The competency-based curriculum that is being developed will specify what nursing students and graduate nurses should know and be able to do. The model for developing the curriculum is based on the Association for Supervision and Curriculum Development's work, *Understanding by Design*, which has been used successfully in K-12 education and several college programs. It focuses on the design of learning activities that achieve performance outcomes. The design uses expert faculty more effectively by designing instructional materials that can be used to aid in student comprehension, rather than delivering content. Hence, the design addresses an issue that health professions' education has wrestled with for years—the problem of content overload. Instead, the approach focuses on teaching for deep understanding (OCNE, 2003).

In instituting the plan for curriculum reform, the Consortium will be using its nursing programs more efficiently. Nursing education content area experts will be developing instructional materials to be used across the Consortium. Simulation laboratories will be developed to teach students critical thinking and psychomotor skills in standardized approaches. Clinical learning will focus on competency-focused experiences and use immersion to acquire competencies (OCNE, 2003).

The timeline for implementation of the reformed curriculum begins in the fall of 2004 with the admission of students in prerequisite courses. In the spring of 2005, students who are nearing completion of prerequisites will apply for admission to the Consortium program with co-admission to the community college and university programs. In fall of 2005, students will enroll in nursing courses simultaneously with required non-nursing courses. The required non-nursing courses can be taken on cooperating college campuses (OCNE, 2003).

Although Oregon has not met its audacious goal of doubling enrollments by 2004, the state has embarked on a process that will increase access to baccalaureate nursing education throughout the state. Students will be enrolled in a program that is seamless and standardized from the associate to the bachelor's degree. In addition, faculty and clinical facilities will be more efficiently utilized throughout the state (OCNE, 2003).

Differentiated Entry-Level Competencies of Graduates of Texas Nursing Programs (Differentiated Competencies)

Dr. Sands described the development and updating of the Differentiated Competencies that have been in place since 2002 and are an update of a 1993 guidance document entitled *Essential Competencies of Texas Graduates of Education Programs in Nursing.* The Differentiated Competencies represent the input of nurse educators and employers of nurses in the areas of knowledge and clinical behaviors/ judgment. Competencies are defined as "effective demonstration, by the time of graduation, of knowledge, judgment, skills and professional values derived from the nursing and general education content" (Texas Board of Nurse Examiners [TBNE], 1993, p. ii). The competencies describe expected outcomes mandated by the Texas Board of Nurse Examiners for students at the time of graduation and are not construed to identify skills of nurses who have been in practice and who have progressed beyond the novice level (TBNE, 2002).

The Texas competencies are organized according to the three major roles of the nurse: Provider of Care, Coordinator of Care, and Member of the Profession. The competencies serve as guidelines for the following, among others: new graduates in determining the ability to accept prospective positions, nurse staff developers for designing orientation programs; human resource personnel for writing job descriptions; nurse faculty to evaluate and refine existing curricula in practical nursing, associate degree/ diploma, and baccalaureate programs.

Perspectives on the nursing shortage from the National League for Nursing Accrediting Commission (NLNAC)

The NLNAC accredits five different types of nursing education, including practical nursing, diploma, associate, bachelor's, and master's levels, for a total of 1,500 programs throughout the U.S. The Commission supports the interests of nursing education, nursing practice, and the public by the functions of accreditation. Accreditation is "a voluntary, self-regulatory process by which non-governmental associations recognize educational institutions or programs that have been found to meet or exceed standards and criteria for educational quality" (National League for Nursing Accreditation Commission [NLNAC], 2004). Accreditation also assists in the improvement of institutions by investing in resources, following processes outlined in the accreditation manuals, and developing and measuring outcome criteria for excellence in nursing education. NLNAC monitoring of certificate, diploma, and degree offerings is tied closely to state examination and licensing rules and regulations and to the oversight of preparation for work in the profession (NLNAC, 2004).

Ms. Grumet stated that programs should consider the following factors when determining outcomes: how to improve retention of graduates in the profession, and how to meet the need for safe practitioners who are capable of passing the licensing examination. She suggested that nursing programs create more incentives for students, such as scholarships, academic support, child care, and flexible scheduling of classes and clinical experience.

Educational programs should "walk the talk" of articulation (Grumet, 2004). In addition, educators should respect the prior learning, life experience, and expertise of students. Grumet recommended that programs work toward becoming "true" to their missions, i.e., associate programs cap credits at 60, and bachelor's programs at 120 credits.

Finally, Grumet said that those who employ nurses should provide for the new graduate's transition into practice, and that the employers should be provided with incentives for helping with graduate transition. These incentives could include support for improved orientation and mentoring programs.

Trends in Licensed Practical Nurse education and practice

Ms. Larsen discussed the following trends in LPN education and practice: post-licensure skill building, fast tracking in PN education, online education, legislation affecting PN education and practice, nontraditional LPN positions, technology, recruitment, and the "trend" that wasn't. Each of these is discussed in the paragraphs below.

The National Association for Practical Nurse Education & Service (NAPNES) offers two post-licensure certification examinations for LPNs—in pharmacology and long-term care. Both are certification examinations that verify the attainment of knowledge in the two content areas.

"Fast tracking" is a program that delivers prerequisite courses in subjects such as fundamentals in health care delivery, medical terminology, and nurse assisting theory. Certified nursing assistants and other nursing assistive personnel may enroll in these courses to obtain advanced placement in PN programs.

Online educational offerings are being developed for LPNs to advance more quickly through RN programs. These programs must meet the criteria for approval by state boards of nursing.

Under the Nurse Reinvestment Act (NRA) federal funding is available in small amounts, for Comprehensive Geriatric Education, for LPNs and other care providers in long-term care facilities (42 USC 298, Comprehensive Geriatric Education, Section 855). Facilities seeking NRA funding must demonstrate that they have processes in place to reduce turnover and increase retention and job satisfaction among their employees as well as other benchmarks indicating a high quality of care.

LPNs are increasingly being employed in nontraditional roles, such as case management, law firms (chronology of events documentation), insurance companies (chart review), biomedical research protocols, wound care specialists, and bilingual interpreters. NAPNES supports these nontraditional positions and believes that they are reflective of the value industry places on LPNs. Ms. Larsen stated that current trends seem to indicate that fewer LPNs will be employed in acute care facilities, because of the shift toward increasing the numbers of RNs delivering care to patients.

LPNs are becoming increasingly vested in technology, as technology assumes a greater role in supporting health care delivery. Ms. Larsen reviewed the technology associated with bar-code medication administration systems and other scanning devices.

There is little national information available at the present time concerning LPNs. Ms. Larsen noted that the Health Workforce Center at the University of California, San Francisco, is studying the supply of LPNs, the locations in which they work, and the factors that affect demand for LPNs. The results of this study should be available later in 2004.

NAPNES is planning a nationwide recruitment campaign for PN education. This campaign will provide outreach information to high schools and church groups, and will target minority communities.

Finally, Ms. Larsen discussed the "trend" that wasn't, specifically the reversal of the law in North Dakota originally passed in 1987 that required an associate degree for the LPN. In 2003, the state legislature repealed that law, eliminating the educational requirement. In the 17 years that the law was in effect, North Dakota remained the only state with the associate degree requirement for LPNs.

Education Recommendations

The Advisory Council's recommendations are aimed at enhancing access to nursing education and increasing the capacity of schools to enroll more students.

Enhancing access to nursing education

Recommendation #1:

Establish a statewide nursing curriculum model that provides standardized subjects and sequences among the associate degree nursing programs.

New Jersey's three types of undergraduate nursing education programs—diploma, AD, and BSN—all prepare graduates for entry into practice through the licensing examination, NCLEX-RN. As well, PN programs prepare graduates to sit for the licensing examination, NCLEX-PN. Standardized curricular approaches such as prescribed in Texas (see below) could be replicated in New Jersey. Standardization would assist students in moving more easily from one level of education to another. The next three paragraphs describe the Texas model.

As a result of a legislative mandate, Texas has developed a transfer process in nursing that enables students to more easily move from associate to baccalaureate programs and also within associate degree programs. In 1997 the Texas legislature passed enabling legislation that required all state-supported two- and four-year schools to accept credits for similar courses. Thus, it became illegal for one state-supported institution to reject credits earned satisfactorily in another Texas state-supported college for similar coursework. That same legislation also required certain high-demand disciplines to create field-of-study curricula that captured both the general education core with credit ranges and the discipline-specific core that could be transferred from a community college to a four-year institution. In 1999, the state legislature passed legislation that enabled the constitution of advisory committees to create the field-of-study curricular requirements. Nursing was one of the selected high-demand disciplines to undergo a field-of-study analysis (C. Parsoneault, personal communication, May 24, 2004).

Subsequently, Texas has created a system in which any new or existing nursing program must adopt common terminology and a range of credits with specific student outcomes derived from the "Field of Study Curriculum for Nursing" (listed on the Texas Higher Education Coordinating Board web site at http://www.thecb.state.tx.us/ctc/ip/ core11_00/FOSCNursingFINAL.htm). Associate degree students may transfer satisfactorily completed credits from one institution to another provided that students are transferring to similarly constructed curricula; i.e., block curriculum courses transfer to other block curriculum programs and integrated curricula to integrated curricula. Students transferring completed associate degrees into baccalaureate degree programs are given full credit for their coursework at the lower division, although some baccalaureate degree programs may require "bridge" courses to facilitate

the transition of students from the lower to the upper division. All general education courses in Texas are completely transferable (C. Parsoneault, personal communication, May 24, 2004).

In addition, the Board of Nurse Examiners in Texas has created a competency model for all levels of nursing from the vocational nurse level to the graduate level. Therefore, curricular plans are also constructed on competency models to meet the Board of Nurse Examiners requirements as well as the Texas Higher Education Coordinating Board requirements for the field-of-study curricula.

Wisconsin has embarked on a similar journey. In Wisconsin, for example, PN and AD education is provided through the community college system, and the nursing educators have recently completed a statewide standardization of courses—through goals and objectives, course numbering and sequencing, and credit hour structure (A. Brett, personal communication, April 30, 2004).

At the time of the writing of this report, the California State Legislature was hearing Assembly Bill 2839 (http://www.leginfo.ca.gov/pub/bill/asm/ab_2801-2850/ ab_2839_bill_20040220_introduced.pdf), which would require the Board of Registered Nursing to approve only those nursing programs within geographic areas that articulate one with the other. Enactment of this legislation would require the California community colleges, California State University, and the private BSN programs within specified geographic regions to establish seamless articulation agreements such that graduates of the community colleges could enroll directly into the junior year of the baccalaureate programs. Similar articulation models exist in other states, including Colorado, Arizona, and South Carolina.

Accomplishing a standardized curriculum in New Jersey would require investment of time and resources among the faculty and administrative personnel in the programs. The State could set aside funds to support this activity.

Recommendation #2:

Establish a Commission to investigate the granting of the Bachelor of Science in Nursing (BSN) by community colleges.

Two states, Texas and Florida, have enabling legislation authorizing community colleges to offer baccalaureate degrees. In the Florida statute (Title XLVII, ß 1007.33), community colleges are authorized to develop proposals to deliver specified baccalaureate programs in their districts to meet local workforce needs (Florida K-20 Education Code, 2003). In Texas, SB 286 passed in the 2003 legislative session. It grants authority to the Texas Higher Education Coordinating Board to establish a pilot project to "examine the feasibility and effectiveness of authorizing public junior colleges to offer baccalaureate degree programs in the fields of applied science and applied technology (Sec. 130.0012, S.B. No. 286). Similar to Florida's statute, this bill provides that the junior college and the coordinating board determine the need for the degree program in the region served by the college.

In the fall of 2003, Miami Dade College began to offer baccalaureate degree programs leading to teacher certification from K-12 (Miami-Dade College, 2004). St. Petersburg College (Florida) offers the baccalaureate degree in nursing as well as dental hygiene, technology management, and education. It may be the first community college to offer the BSN.

No New Jersey community college is authorized to award the baccalaureate degree. However, if the authority were granted, community colleges could establish associate and baccalaureate programs using either a 2 + 2 model (two years for the associate at the lower division, followed by two years at the upper division for the baccalaureate) or a generic baccalaureate program. By doing so, access to

baccalaureate education would be increased, because of the access to community colleges within the State.

Recommendation #3:

Require vocational schools to establish partnerships with community colleges and universities that enable students to receive college credits for general education courses, e.g., physical and social sciences.

PN programs are typically one calendar year in length, although there has been movement toward increasing the programs to 15 or even 18 months in length. In addition to nursing courses, students enroll in such general education courses as anatomy and physiology, psychology, and sociology. Although LPN students enrolled in RN programs receive credit for up to two nursing courses, they must complete different general education courses from those taken in PN programs (Fuld Leadership Council, Colleagues in Caring, New Jersey State Nurses Association, 2002). However, if vocational-technical schools were to establish partnerships with community colleges for the general education courses required in PN programs, transferability from one level to another would be assured, and a barrier to mobility would be reduced.

Increasing capacity to enroll more students.

Recommendation #4:

Subsidize nursing faculty salaries so that they are comparable with health care industry standards for nursing employees with comparable education and experience.

An increased demand for services in the private sector is generally met with increased wages as a means for attracting the provider of the services. Salaries of State-supported colleges and universities have not kept pace with the increased demand for nurses holding a graduate degree. Salary is an influential factor in the employment decisions of those completing graduate education. Recently, the National League for Nursing reported that in the North Atlantic region of the country, the median salary for full-time faculty at the rank of assistant professor was $45,417 in 2002. Furthermore, in baccalaureate and higher degree programs the median salary was $50,000, in associate degree programs it was $44,592, and in diploma programs it was $43,510. In virtually all salary categories comparing nurse faculty and education administrators with doctorates or master's degrees and nurses employed in hospitals from head nurse through administrator for nursing, the private sector salaries greatly exceeded those in academe (AACN Task Force on Future Faculty, 2003). If educational capacity is to be increased over the foreseeable future and sustained through 2020, nursing faculty will have to be compensated at comparable rates with their colleagues in the private sector.

Chapter V: Recruitment of Nurses

Introduction

The shortage of nurses that began in the late 1990s continues, and projections of a prolonged nursing shortage caused by the aging of the population and the retirement of the baby boomers indicate that policymakers should consider long-term strategies aimed at increasing the supply of nurses over the next 16 years. Recruitment strategies must be aimed at all segments of the population, especially at those underrepresented in nursing—men, and people of color. The Advisory Council heard testimony on recruitment concerns; the findings from the hearings and the Council's recruitment recommendations are presented here.

Testimony at public hearings

Testimony at the public hearings centered on two components: recruitment into the profession and recruitment of licensed nurses into the State. There were 76 suggestions rendered among the hearing participants, the majority of which (68, 89%) were directed at recruitment into the profession. These were classified into suggestions for recruitment campaigns (23), funding for prospective students (21), improving the image of nursing (18), and conducting studies or establishing recruitment plans (6).

Hearing participants indicated that recruitment efforts should be targeted toward two groups—students and nontraditional cohorts, such as incumbent workers, second-degree students, men, and people of color. School-age children could be recruited using "innovative" approaches or existing campaigns such as the one developed by Johnson & Johnson (http://www.discovernursing.com/default.asp). In addition, the State could establish a "pre-nurse" corps, giving scholarships to those engaged in the corps.

Of the 21 suggestions aimed at funding, hearing participants suggested that the State invest in a combination of ventures to include scholarships, loan forgiveness programs, and tuition assistance for New Jersey citizens. Other suggestions targeted providing funds to subsidize ancillary expenses incurred by students, such as child-care, transportation, and living stipends. The State could consider income tax waivers and tax credits for educational expenses. Finally, some suggested that the State provide incentives to career mobility applicants (incumbent health workers interested in becoming nurses) through a variety of programs, such as benefits for part-time workers, flexible scheduling, and child care costs.

Improving the image of nursing could serve as a recruitment strategy. Some of the 18 image suggestions were aimed at strategies that nurses would have to control, such as telling a positive story of nursing to others. Other suggestions would have the State assume a greater role in communicating the positive aspects of nursing or passing legislation aimed at protecting nurses from violence. Still others asked that federal Nurse Reinvestment Act funds be aimed at an image campaign.

Finally, six suggestions were made to study recruitment issues or develop recruitment plans. These included enlisting insurance companies to contribute ideas to enhance the recruitment of nurses or develop a high school curriculum around "medical" sciences aimed at recruitment into the health professions.

A smaller number of suggestions were proffered that were directed toward recruiting licensed nurses into the State. Some were aimed at employers, including offering loan forgiveness/tuition reimbursement, offering free or reduced health insurance, or providing assistance with formal continuing education. Others would promote changes in the regulations to streamline bureaucratic procedures regarding the

endorsement of licenses for nurses licensed in other states or evaluating barriers to practice by foreign-trained nurses.

The Advisory Council also heard testimony concerning mechanisms that are already available in New Jersey and other states that enhance the recruitment of nurses, or so-called "best practices." The following were offered as successful strategies by hearing participants: Project Launch at the Community Medical Center at Toms River, The New Jersey Hospital Association's Center for Nursing and Health Careers, a full-day health professions immersion for middle-school students offered by St. Peter's University Hospital, nurse externship programs throughout the State, partnerships with Workforce Investment Boards and Chambers of Commerce, the New Jersey Collaborating Center for Nursing, and the Rutgers University student-organized informal Future Nurses' Club.

Recruitment Recommendations

The Council's recommendations for recruitment are primarily focused on consolidating recruitment activities and targeting underrepresented populations in New Jersey, reflecting the realization that at the time of the Council's recommendations, New Jersey is faced with an increasing educational capacity dilemma. Increasing the capacity of the nursing programs is essential; at the same time, a long-range strategy aimed at recruiting young people must be undertaken to avoid the predicted shortage that will occur when the baby boomers retire.

Consolidating recruitment activities

Recommendation #1:

Fund a recruitment specialist/marketing person or team to promote nursing in conjunction with, or delegated, to the NJCCN.

The NJCCN was founded in 2002 as a public/private partnership between the State and The Robert Wood Johnson Foundation: the Center was created legislatively with initial funding by the Foundation. Housed in Newark, within the Rutgers College of Nursing, the Center develops and disseminates databased, objective information and provides a venue for the ongoing discussion of policies and procedures for allocating State and private resources toward the nursing workforce. Placing a recruitment specialist/marketing person or team at the Center would be consistent with the mission of the Center and could assist in coordinating State-wide nursing recruitment activities. This recruitment "czar" would coordinate statewide recruitment activities and provide technical assistance to those interested in creating new recruitment techniques. In addition, the "czar" would be responsible for identifying the best practices in recruitment from nursing and other professions, developing new recruitment strategies, and disseminating information about recruitment activities currently in place.

Recruiting underrepresented populations into nursing

Recommendation #2:

Promote nursing within the one-stop career centers administered through the N.J. Department of Labor and in collaboration with the NJCCN.

The cornerstone of New Jersey's workforce investment system is the establishment and continuous improvement of the One-Stop Career Centers. The New Jersey Department of Labor and local Workforce Investment Boards (WIBs) have created One-Stop Career Centers in every county throughout New

Jersey. These centers offer a wide range of tools to help people find jobs or new careers. The services include workforce information, job listings, training providers, career advice, and a computer system to match job seekers' skills and aptitudes with current job openings. In addition, the centers, along with their partners, offer training programs, on-the-job training, and apprenticeships in many fields (N.J. Department of Labor, 2004).

As an example of the work of the local WIBs, The Mercer County Workforce Investment Board established a taskforce to study the health care worker crisis. This taskforce developed a recruitment model to recruit workers/students into the health care industry. The Mercer County WIB is willing to partner with other WIBs throughout New Jersey to expand the model (Mercer County Workforce Investment Board, 2004).

Another model was developed through a grant provided by the N.J. DOL to the Federally Qualified Health Care Centers. Through this grant the Federal Health Care Clinic created a process for recruiting health care workers for various positions through the One-Stop Career Centers. The N.J. DOL will identify ways this model can be merged with the recruitment recommendations of the Advisory Council on Nursing (J. Hammill, personal communication, April 15, 2004).

The N.J. DOL has also funded an upward mobility program to assist nurses' aides to become LPNs, and LPNs to become RNs. This program was made in partnership with the Camden Workforce Investment Board, Cooper University Hospital, and Our Lady of Lourdes Medical Center.

The State should take advantage of all federal and local partnering opportunities that are available for recruiting individuals into nursing careers. The N.J. DOL could create a health careers "specialist" for each of the One-Stop Career Centers. This person would develop expertise essential to evaluating and counseling individuals wishing to pursue careers in health care.

Recommendation #3:

Create a joint marketing initiative between the N.J. Department of Labor and health care entities, including educational institutions, providers, professional organizations, and unions focusing on all types of nursing programs.

The N.J. DOL is committed to increasing its recruitment activities for nursing and other health care opportunities. The N.J. DOL will market nursing and health care opportunities through a variety of venues, including its web site, www.wnjpin.net, written publications such as *Hot Jobs,* other media such as NJN, N.J. Works, and Jobcasts, and posters portraying the positive aspects of nursing at the One-Stop Centers (J. Hammill, written communication, January 2004).

Recommendation #4:

Provide funds for ongoing skills/needs assessment and employment vacancy profiling for nursing to the N.J. Department of Labor.

Over the past two years, the N.J. DOL, in collaboration with the State Employment and Training Commission and the Heldrich Center, has been engaged in a demand-side study. The purpose of the study is to identify the future skills demands in the workplace. The results of this study will be made available to job seekers, employers, policymakers, educational institutions, and workforce investment service providers. The NJCCN is now up and running with researchers aboard and it is well positioned to continue this work with ongoing funding to keep the information relevant.

Recommendation #5:

Create a State-funded nurse corps to include models, such as *Prosperity New Jersey,* for potential nursing students partnering with health care organizations to provide funds for their nursing education.

Prosperity New Jersey was established in 2002 under the leadership of Governor James E. McGreevey to create a partnership among the private sector, the research university community, and the State to leverage New Jersey's strengths and to develop the Garden State as the "Innovation State." *Prosperity New Jersey* works to ensure that New Jersey businesses have a corps of highly educated and skilled workers who can meet the demands of New Jersey's economy. In partnership, businesses and the State identify and address the State's workforce needs by developing and supporting innovative approaches to better educate and train the State's workers (McGreevey, 2002). The Advisory Council is recommending that the State consider extending the *Prosperity* model to nursing.

Recommendation #6:

Require the Commission on Higher Education to expand the EOF programs specific to nursing, e.g., the existing Rutgers EOF Nursing Program.

The New Jersey Educational Opportunity Fund (EOF) was created by law in 1968 to ensure meaningful access to higher education for those who come from backgrounds of economic and educational disadvantage. The Fund assists low-income New Jersey residents who are capable and motivated, but who lack adequate preparation for college study (New Jersey Commission on Higher Education, 2004).

EOF is distinctive in the comprehensiveness of its approach. To ensure the opportunity to attend college, the Fund provides supplemental financial aid to help cover college costs (such as books, fees, room and board) that are not covered by New Jersey's Tuition Aid Grant Program. In addition, to ensure that participants are able to succeed, EOF supports a wide array of campus-based outreach services. These include pre-college articulation, basic skills testing and remediation, systematic retention efforts, peer counseling and peer tutoring, academic support courses, multicultural curricula and human relations programming, student leadership development, and outcomes-based program evaluation (New Jersey Commission on Higher Education, 2004).

EOF is a leader in New Jersey's higher education system's effort to increase diversity. Although participation is not limited to minority students, EOF sponsors more than one-third of the African-American and Latino students at the State colleges and New Jersey's independent institutions (New Jersey Commission on Higher Education, 2004).

Rutgers is the only State institution with profession-specific EOF programs. The College of Nursing EOF program in Newark is a large and very successful one. It is in its 20th year and enrolls between 15 and 22 freshmen every academic year, with 12 to 20 graduates each year. The students receive remedial work as necessary, tutoring, counseling, stipends, and great support by being members of an extra special component of the College of Nursing. Many students have completed graduate education with two former students having earned doctorates in nursing. The EOF program also has an Institute for Minority Leadership that prepares minority BSN nurses for leadership positions.

Increasing the numbers of EOF programs specifically for nursing would assure the availability of nursing education for students from economically and educationally disadvantaged backgrounds. Additionally, EOF programs would increase the racial/ethnic diversity of the New Jersey nursing workforce, as well as lay a solid foundation for some to become nursing leaders.

Recommendation #7:

Require the Department of Education to expand programs specific to nursing, e.g., the New Community Corporation.

The New Community Corporation was established in 1967 in Newark as a comprehensive community development corporation. It is the nation's largest and most comprehensive community development organization. New Community touches the lives of more than 50,000 people in Newark and other northern New Jersey urban areas. It owns and manages more than 3,000 units of housing and employs 2,300 people. The Corporation provides an array of community-based services and programs, including housing; early childhood education; transitional housing for the homeless; job training; education; health care; community arts; and youth programs and social services for children, families, and seniors. All of its for-profit income is reinvested back into the community to promote self-sufficiency through economic opportunity (New Community Corporation [NCC], 2004b).

The Corporation also operates a School of Practical Nursing. In October of 2003 the Corporation's School of Practical Nursing graduated its first class of 41 students who successfully passed the New Jersey State Board Practical Nurse examination to become LPNs. The program is designed to be responsive to the needs of urban-residing paraprofessionals, such as Certified Nursing Assistants and Certified Home Health Aides, who wish to continue their education in nursing. Located in the inner city of Newark, the program provides Corporation health care employees with a convenient location and class schedule that accommodates their work demands, thus increasing access to PN education (NCC, 2004b).

New Community has mobilized its own resources as well as private donations to assist students in its nursing program. Most students qualify for federal assistance, and the New Community Workforce Development Center has received accreditation from the Department of Education. Also available are low-cost or fully subsidized day care, as well as free tutoring, free classes and seminars to enhance study skills, free remedial course work, and donated personal computers for home use. Furthermore, the faculty are moving forward to develop articulation agreements with RN programs (NCC, 2004a).

The Council believes that the New Community model is one that is well worth replicating in other urban areas of the State.

Recommendation #8:

Institute State-sponsored scholarships for nursing students at all levels and loan forgiveness programs for new nursing graduates working in New Jersey.

Recommendation #9:

Provide scholarships for New Jersey resident students who pursue nursing education out-of-state and commit to working as nurses in New Jersey for two years upon completion of their education.

Increasing State support for nursing education in the form of scholarships and loan-repayment programs may serve both to increase the numbers of students interested in nursing, as well as the numbers of nursing graduates employed in New Jersey. At the present time, there are no nursing-specific State scholarships.

Recommendation #10:

Establish a state fund to provide subsidies through the N.J. Department of Labor to employers who create nursing work-study programs for their non-nurse employees and assist the employers in providing the salaries and benefits for the employee.

Recommendation #11:

Provide incentives to employers to create and implement work-study programs that offer tuition, full-time salary, and full-time benefits combined with flexible part-time hours for nursing students who are also employees of the health care organization.

Promoting educational mobility among employees is an effective means to increase access to education as well as recruit into the profession. Qualified employees are rewarded for their service to the employers, who in turn are more likely to reap the benefits of nurses committed to the agency and oriented to its policies and procedures.

An exemplar of an upward mobility program for employees is Project L.I.N.C. (Ladders in Nursing Careers), which began in the late 1980s in New York City at the Greater New York Hospital Association. Project L.I.N.C., funded by The Robert Wood Johnson Foundation, was designed to meet institutions' needs for nursing personnel by tapping into the pool of qualified entry- and mid-level health care personnel already working at the facilities. The project paved the way for participants to return to school by providing them with financial resources and support systems. In New York alone, more than 9,000 health care personnel applied for participation in the program (Project L.I.N.C., 1997).

In New Jersey, Bayonne Medical Center operates a similar program to L.I.N.C. Any employee who works at least 24 hours per week is eligible for the nursing school incentive. Bayonne Medical Center pays the full tuition of the enrolled employee. Once the employee has graduated, he or she is guaranteed a full-time RN position and is obligated to work for three years at Bayonne Hospital.

The State could implement and fund a competitive grant program to provide incentive grants or other incentives such as tax credits to employers for establishing, expanding, or otherwise enhancing these types of programs. The grant program could be managed through a State agency.

Chapter VI: Retention of Nurses in the Workplace

The importance of keeping nurses in the workforce cannot be overemphasized. The New Jersey nursing workforce is aging, with 40 percent of the RN workforce over the age of 50 (Dickson, 2003b). Fewer younger people are selecting nursing as a career, and the Generation X cohort is approximately half the size of the baby boomers who are rapidly approaching retirement age (Nurses for a Healthier Tomorrow, 2001). Nursing graduates are more likely to leave the profession in the first few years after graduation than at any other time (Goode & Williams, 2004); however, national data reveal that 81.7 percent of RNs are employed in nursing (Spratley et al., 2000). In New Jersey, 79.3 percent of RNs are employed in nursing (Dickson, 2003b). Consequently, policymakers and other stakeholders must consider implementing initiatives specifically designed to enhance the retention of older nurses and reduce attrition of younger nurses.

Findings from the literature

The factors that retain nurses in the workplace are well documented (Health Care Advisory Board, 2001; Kramer & Schmalenberg, 2002; McClure & Hinshaw, 2002; McClure, Poulin, Sovie & Wandelt, 1983). These include strong, visible nurse executives (McClure & Hinshaw, 2002); nurse managers who create a culture of retention through risk assessment, crisis and conflict resolution, management of employee stress, and relationship-building with effective communication skills (Gelinas & Bohlen, 2002); an empowered nursing staff that participates in organizational decision-making and is encouraged to make patient care decisions at the point of service (McClure & Hinshaw, 2002); and a culture in which professional development of nurses is fostered (IOM, 2004). Other factors include: excellent nurse-physician relationships (Aiken, Havens, & Sloane, 2000); adequate support services for nurses to care for their patients (Aiken, Havens, & Sloane, 2000); working with other competent nurses (McClure & Hinshaw, 2002); sufficient nurses to care for patients (Aiken et al., 2000); and a perception that nurses are valued for their work, knowledge, and expertise (Aiken et al., 2000). Furthermore, the hospital organizational attributes that attract and retain nurses are also found to be consistently and significantly associated with better patient outcomes than in hospitals with higher nurse attrition and turnover rates (Aiken et al., 2000).

Assuring that nurses are providing safe, competent nursing care

Staffing

The data linking nurse staffing and patient outcomes are compelling. In its 2004 report on work environment, the Institute of Medicine describes the critical role that nurses play in maintaining patient safety and the work environment factors that facilitate or interfere with nurses' work. The IOM report summarizes research linking adequate numbers of nurses to patient safety in hospitals and nursing homes (Aiken, Sloane, Lake, Sochalski, & Weber, 1999: Aiken et al., 2002; Amaravadi, Dimick, Pronovost, & Lipsett, 2000; Blegen & Vaughn, 1998; Blegen, Goode, & Reed, 1998; Bolton, Jones, Aydin, Donaldson, Brown, Lowe et al., 2001; Bond, Raehl, Pitterle, & Franke, 1999; Dimick, Swoboda, Pronovost, & Lipsett, 2001; Flood & Diers, 1988; Hartz, Kranauer, & Kuhn, 1989; Hunt & Hagen, 1998; Kovner & Gergen, 1998; Kovner, Jones, Zhan, Gergen, & Basu, 2002; Lichtig, Knauf, & Milholland, 1999; Needleman et al., 2002; Pronovost, Dang, Dorman, Lipsett, Garrett, Jenckes et al., 2001; Shortell, Zimmerman, Rosseau, Gillies, Wagner, Draper et al., 1994). The IOM recommends a three-pronged approach to nurse staffing and patient safety: regulatory changes, more effective internal staffing practices by organizations, and marketplace/consumer-driven approaches.

From a regulatory perspective, the IOM (2004) recommended the adoption of minimal staffing ratios in nursing homes as specified by the Center for Medicaid and Medicare Services (CMS) in 2001. CMS recommended minimum staffing ratios of 2.4-2.8 hours per resident day for nursing assistants, 1.1-1.3 hours per resident day for licensed nursing staff, and 0.55-0.75 hour per resident day for RNs. The purpose of minimum staffing standards in nursing homes would be to ensure that at least the minimum resources are in place to preserve the safety of nursing home residents.

On the other hand, the IOM (2004) did not find as clear-cut evidence to support staffing ratios in hospitals. They do indicate that, "it is feasible to establish a minimum staffing level for each type of staff based on the consensus of experts about unacceptable levels of risks for untoward events" (p. 182-3). However, they also note that although "staffing ratios can help protect against the most egregious staffing deficiencies, [health care organizations] will need to employ more sensitive approaches internally to fine-tune staffing levels" (p. 183). With the exception of intensive care units, the IOM found few studies that link specific staffing ratios to patient safety and outcomes. However, one study was cited that measured the effects of different staffing levels within a medical-surgical unit (Sochalski, 2001). The IOM further notes that "staffing ratios may assure a baseline level of staffing in health care organizations, but they are 'poor instruments' for achieving optimal staffing" (p. 183). Depending on the skill mix and expertise of nursing staff and patient acuity, minimum ratios may not provide the needed levels for patient safety. In addition, counts of patients needed to calculate nurse staffing levels must be taken at different points of time throughout a 24-hour period.

The second approach toward nurse staffing recommended by the IOM (2004) is the adoption of more effective internal staffing practices by health care organizations. These practices should include the following: (1) incorporate admissions, discharges and "less than 24-hour" patients into estimates of patient volume; (2) involve direct-care nursing staff in selecting, modifying, and evaluating staffing methods; (3) provide for "on-time" staffing or demand elasticity to accommodate unpredicted variations in patient volume, and/or acuity, and resulting workload changes; (4) minimize staff turnover and use of nursing staff from external agencies; and (5) assess staffing methodologies and their relationship to patient safety.

The third approach directed at nurse staffing linked with patient safety recommended by the IOM (2004) is aimed at influencing the marketplace and consumers. The IOM recommends that consumers be provided with information about health care quality through hospital and nursing home report cards on performance and staffing levels. Additionally, the IOM recommends that reliable measures of nurse staffing be developed for nursing homes and hospitals.

Adequate nurse staffing is key to providing safe patient care. Without adequate nurse staffing, hospitals and other employers of nurses may find themselves in a vicious cycle created by inadequate numbers of nurses. The cycle includes increasing nurse dissatisfaction and low morale, increased turnover and vacancy rates among RNs, lack of experience of newly employed RNs without the presence of adequate mentoring, and further dissatisfaction among new and more experienced RNs; all contributing to even higher turnover and vacancy rates (Gelinas & Bohlen, 2002). To reverse the cycle, Australia implemented nurse-to-patient ratios in 2000. Preliminary data indicate that mandated ratios were responsible for enticing 2,000 nurses to return to the profession in Victoria alone, with nearly 500 nurses waiting to complete refresher courses to re-enter the workforce (Morieson, 2001). In the U.S., facilities that have instituted voluntary nurse-to-patient ratios have also reversed the cycle created by understaffing. For example, in 2001 the Hi-Desert Medical Center in Joshua Tree, California, reduced its nurse-to-patient ratio on its medical/surgical units from 1:6-8 to 1:4 on the day shift and 1:7-9 to 1:5 on the evening/night shift. In the geographically remote region of Joshua Tree, the medical center's vacancy rate dropped from 50 percent to less than 1 percent within one year (Avels, 2001).

Competence of the nursing workforce

The clinical competence of the nursing workforce has been cited as one of the essentials of magnetism for nurses. Magnetism refers to the ability of a facility to attract and retain its nursing workforce and has three criteria: (1) nurses consider the hospital a good place to practice nursing and a good place to work; (2) the hospital has the ability to recruit and retain professional nurses; and (3) the hospital is located in a geographic area where it has competition for staff from other institutions and agencies (McClure, Poulin, Sovie, & Wendelt, 1983).

Kramer and Hafner (1989) suggested that clinical competence is positively related to self-esteem and locus of control. The higher an individual's self-esteem, the higher the perceived competence, and the more effective the functioning of the nurse and the quality of care delivered (Kramer & Hafner). Given the realities of today's environment, clinically competent nurses are able to function more effectively in high-stress patient-care units where patients are sicker and lengths of stay are shortened (IOM, 2004).

The IOM report, *Crossing the Quality Chasm* (2001), cites the increasing complexity of science and technology as one of the main attributes of the U.S. delivery system affecting quality. They believe that the expansion of clinical knowledge, pharmaceuticals, medical devices, and other technologies are likely to provide benefits to patients. However, the expansion in technologies also points to the need for health care professionals to maintain their expertise. "Today, no one clinician can retain all the information necessary for sound, evidence-based practice. No *unaided* human being can read, recall and act effectively on the volume of clinically relevant scientific literature" (IOM, 2001, p. 25). Consequently, the IOM (2004) points out the need for organizations to provide actively for their nursing staff's ongoing acquisition of new clinical skills and knowledge.

Pre-licensure education cannot provide sufficient frequency and diversity of experiences for students to perform at any level except one of the beginning practitioner. Nurses, like physicians, come to their initial places of employment as novices without certain skills and knowledge (IOM, 2004). The employer is therefore responsible for assisting beginning nurses to attain these skills. As nurses gain experience and knowledge in their practice, they come to achieve a level of expertise, but they must continue to hone their skills through acquisition of knowledge to maintain currency and provide quality care to their patients.

Although continuing education in nursing is essential, few mechanisms are in place to provide for that education. In 1996, the National Advisory Council on Nursing Education and Practice (NACNEP) noted that a large portion of existing RNs had not been adequately prepared to meet the needs of their patients in the face of rapidly expanding knowledge. Further, in 2001, the National Council of State Boards of Nursing (NCSBN) found that fewer than half of nursing administrators surveyed evaluated newly licensed nurses as possessing the educational preparation needed to provide safe, effective care.

The lack of knowledge among nurses is not just the result of the inability of pre-licensure programs to prepare adequately students for practice. In almost half the 56 U.S. jurisdictions (states, districts, and territories) there are no mechanisms in place to assure the continuing competence of RNs and LPNs (NCSBN, 1999). Even in those jurisdictions that require continuing education for maintaining competency, the data are mixed about the effectiveness of this approach. In 2003 NCSBN released results from a national survey of RNs and LPNs that sought to establish a link between mandatory continuing education and the development of professional competence. The findings indicated that nurses tend to accumulate continuing education whether or not they are mandated to do so and that nurses with or without continuing education mandates report the same levels of professional growth in 10 professional ability categories

(e.g., collect information from patients in a timely manner, identify patients' current and future needs, work effectively in a team, and recognize areas of their own practice in need of improvement). However, the survey also found that nurses with continuing education mandates might have greater access to some sources of continuing education (Smith, 2003).

A number of best-practice models exist for enhancing the knowledge and skills base of new nurse graduates and the continuing competency of nurses throughout their careers. These include preceptorships and residencies for new nurses, individualized training, simulation, and decision support at the point of care delivery. Structured internships/orientation/residence programs have been found to increase retention of new graduates. For example, a 12-week competency-based orientation program for new graduates at the Washington Hospital Center in Washington, D.C., led to the retention after one year of 90 percent of the participants (Fey & Miltner, 2000). The Inova Health System in Fairfax, Virginia, developed a new graduate RN internship program using a standardized curriculum across its five hospitals. Precepted clinical orientation and didactic content were designed to assist the new graduate in acquiring and applying clinical knowledge. Of the 75 participants, 88 percent were retained in the system after one year ((Owens, Turjanica, Scanion, Sandhusen, Williamson, Hebert, et al., 2001). In a similar residency/ orientation program for new graduates, 90 percent were retained in the system for one year, 85 percent at 18 months (Marcum & West, in press).

On the other hand, individualized training includes providing training experiences for nurses using a variety of methods, including reading, lectures, psychomotor practice, and CD-ROM-based and web-based approaches. Simulation is the use of artificially created practice events, or situations, constructed to resemble an actual event or situation that an individual is likely to experience on the job. Simulation allows workers to practice dealing with new technology or situations without fear of jeopardy to themselves or their patients. Decision support methods assist nurses to determine appropriate courses of action at the point of care delivery and may be low-tech (e.g., manuals, critical pathways) or high-tech (e.g., hand-held personal device assistants) (IOM, 2004).

As a result of the importance of updating and maintaining clinical expertise to provide safe care, the IOM (2004) recommended that organizations dedicate fiscal resources equal to a defined percentage of the nursing payroll to support nursing staff in their ongoing acquisition of knowledge and skills essential for their practice.

For new graduates of nursing education programs, being clinically competent and prepared for the demands of the work environment at the completion of a nursing education program is difficult to achieve. To meet the needs of today's hospitalized patients, new graduates must have the knowledge and skills to care for acutely ill patients with complex needs. No longer are people admitted to hospitals for less than complex nursing care—these patients are treated as outpatients or in the home. Therefore, for graduates to obtain the competencies that are required of nurses in acute care, intense orientation programs must be implemented. Without adequate orientation, new graduates are likely to leave soon after employment. Turnover among new graduates has been cited as 20 percent (Health Care Advisory Board, 2001), although some studies have found turnover rates as high as 53 and 55 percent respectively (Mathews & Nunley, 1992; Hamilton, Murray, Lindholm, & Myers, 1989).

Documentation

Nurses spend much of their time documenting patient activities. In addition to furnishing information useful to health team members, documentation meets facility, insurance, private accreditation, state,

and federal requirements. The IOM (2004) notes that findings from work sampling studies and surveys of nurses estimate that nurses spend from 13 to 28 percent of their time in documentation (Pabst, Scherubel, & Minnick, 1996; Smeltzer, Hines, Beebe, & Keller, 1996; Upenieks, 1998; Urden & Roode, 1997). Home care nurses are estimated to spend a much greater proportion of their time in documentation. Although no work sampling studies of time spent in documentation among home health nurses have been identified, some home care nurses estimate that they spend twice as much time in documenting patient care as hospital nurses, primarily because of the more prescriptive federal regulatory requirements for documentation (Trossman, 2001).

Evidence exists that automated computer-based data entry, if carefully designed with nurse input, can reduce the time that nurses document. Some organizations that have instituted integrated computer-based documentation have achieved cost-savings, sometimes through decreased use of overtime (IOM, 2004).

Financing alternative and effective methods of nursing care delivery

Home care nurses are able to increase and enhance their monitoring abilities through the use of tele-health technologies. Using these technologies has been shown to decrease re-hospitalization and decrease costs among certain types of patients (Southeast Michigan VNA, 2003). In a 120-day pilot study, the Southeast Michigan Visiting Nurses Association followed 32 patients with congestive heart failure following hospital discharge. The patients were provided with devices to measure blood pressure, pulse, and weight. The vital signs were communicated with the nurses daily via the Internet. By monitoring these patients daily and making adjustments in their treatment regimens in collaboration with their physicians, the nurses were able to treat 31 of the 32 patients at home in the first 30 days following hospital discharge. By contrast, 25 percent of home-care patients with heart failure return to the hospitals within 30 days of their discharge. Although this is a small sample, it demonstrates that re-hospitalizations may be reduced in this population. In addition, there may be cost savings to hospitals resulting from fewer re-admissions for the same diagnosis. On the other hand, there are costs associated with purchasing the technology for monitoring. In addition to the ongoing assessment of patients with congestive heart failure, the technology can be used to assess patients with hypertension and diabetes (Southeast Michigan VNA).

Testimony at public hearings

Of the three areas addressed in the public hearings - education, recruitment, and retention - by far the largest response among hearing participants was in the area of retention, with 120 suggestions offered to enhance the retention of nurses. A thematic analysis reveals that the following themes emerged with the most suggestions: increasing compensation and benefits (23), honoring nursing and the expertise of nurses (21), staffing (19), improving efficiencies in the work environment (18), providing financial support to agencies for retention efforts (14), and supporting the professional development of nurses (12).

In the area of increasing compensation and benefits, the most frequently occurring suggestion related to the pension system. Great concern was expressed among participants that pension systems are inadequate to provide financial resources for retired nurses. Other testimony claimed that there is a lack of understanding by nurses about pension plans. Testimony was offered that hospital employers either had changed, or were in the process of changing, pension plans that would reduce benefits specifically for those potential retirees with the greatest longevity. Other testimony indicated a lack of parity between

pension plans for staff nurses and other professions such as teaching. Many stated that insufficient pension systems were a disincentive for nurses to remain employed in some agencies, as well as for recruiting others into the profession.

The suggestions aimed at honoring nurses were directed toward supporting, protecting, and recognizing nurses. Participants asked for support from their managers, support of older nurses, support of nursing practice within the organization, and support of colleagues with addiction problems. They asked that nurses be protected from firing for system errors; from abuse from physicians, managers, and other employees; and from violence. They asked for improved workers' compensation programs. Finally, they asked for recognition of nurses for their competence in patient care.

Another retention concern expressed during the testimony was related to staffing ratios: either in support or opposed to ratios. Those who supported staffing ratios cited their frustration with increased workloads and stated their support for mandating sufficient numbers of nurses to care for patients. Those arguing against ratios centered their statements on the cost of implementing mandated staffing ratios, removal from the nurses of decision-making for appropriate staffing, and concern about the "cookie cutter" approach with mandated ratios (the reliance on numbers instead of other factors that influence decisions about skill mix and nurses).

Participants also suggested that efficiencies be improved in the work environment. Nurses want the burden of excessive documentation to be removed, because this takes nurses away from the care of patients. They also asked that information technology be enhanced for computer order entry and bar coding of medications and other products. They wanted better lifting systems to assist them in moving patients in order to prevent work-related back injuries.

Two hearing participants described how tele-homecare technology has the potential to alleviate the nursing shortage by increasing the productivity of nurses. They stated that many home care agencies within the State have the financial resources to initiate tele-health nursing to monitor chronic disease clients at home, but the agencies are not reimbursed for tele-home visits. According to the testimony, one agency found that a nurse who currently visits six patients per day is able to contact as many as 20 patients per day, provide earlier intervention, increased information, and reduced incidences of hospitalization using tele-monitoring devices. Currently, no reimbursement is provided for the cost of home care via technology for this type of intervention.

Some participants asked that the State relieve the financial burden on hospitals for charity care and inadequate Medicare compensation for home health care. Additionally, they asked that agencies be reimbursed for their expenses related to retention efforts.

Participants suggested that the State support the professional development of nurses through the financing of formal continuing education programs for nurses. They also suggested that agencies institute mentoring and orientation programs for new nurses and ongoing staff development programs for all employees.

In responding to the request to provide information on mechanisms available in New Jersey and other states that enhance the retention of nurses, participants identified several programs. RAMP (Recovery and Monitoring Program), administered by the New Jersey State Nurses Association, is a program that assists nurses with addiction problems through intervention and monitoring during recovery. At the present time, RAMP cannot serve as an alternative-to-discipline program as similarly implemented programs do in all but six states. New Jersey regulations have been drafted to permit nurses enrolled in RAMP to maintain their licenses, if they adhere to the monitoring and treatment requirements of RAMP. Nurses

presenting testimony asked that the State Board of Nursing and the Division of Consumer Affairs implement the regulations. Doing so would be one means by which nurses could be retained in the nursing workforce.

Other mechanisms that enhance the retention of nurses identified in the hearings were shared governance models such as those in place in magnet hospitals, clinical ladder programs that recognize nurses' experience and education, and support groups and mentoring programs for new nurses in their first year of employment.

Presentations to the Council

The Council heard presentations from experts on major retention issues: pension plans from John Abraham, Deputy Director of Research and Information Services, American Federation of Teachers; and staffing issues from Marilyn Chow, DNSc, RN, Vice President, Patient Care Services, Kaiser Permanente Health System (California); Karen Stefaniak, PhD, RN, Chief Nursing Officer/Associate Hospital Director, University of Kentucky Hospital; and Margaret McClure, PhD, RN of New York University.

Pension plans

John Abraham reviewed the two types of pension plans typically offered by New Jersey hospitals. He cited information from a 1999 summary by Watson Wyatt Worldwide that found 73 percent of hospitals nationally offer either stand-alone pension plans or pension plans and capital accumulation plans to their employees. Pension plans can be either defined benefit plans or defined contribution plans. In the defined benefit plan, the final pension benefit is determined through a formula that considers years of service, average salary for three to five years at its highest level, and a formulaic multiplier. Defined contribution plans, on the other hand, are determined by the amount of money that the employer and/or employee contribute to the plan over an employment career.

According to Abraham, enhanced retirement benefits are key recruiting and retention tools that attract and retain high quality workers. The State can play a role in implementing pension plans for nurses by offering the following: purchase of service credit, retiree Cost-of-Living-Adjustment (COLA) fund, retiree fund, longevity bonus, and/or creation of a state-wide hospital pension plan.

Purchase of service credit is a buy-back proposal that could be implemented to cover a nonvested nurse who works in one location for a period of time and relocates to another area. Currently, when a worker moves to a new location, the worker forfeits years of service at the former employer. Under a buy-back proposal, the worker could buy back the nonvested years of service from his or her new employer to enhance her retirement income. The State legislature could establish statewide rules regarding what type of service and when it can be purchased and how it can be purchased and used.

A *retiree COLA fund* could be established and funded for hospital workers. With this fund, the State could provide a COLA for any worker who retires at normal retirement or who completes a certain number of years of service at a hospital beyond retirement age. The worker would begin to vest in a COLA benefit program at 10 percent per year, starting at a certain age, and earn a full benefit after a determined number of extra years of employment. This fund could serve as an incentive for staying employed past retirement age.

A *retiree fund* would provide some benefits for retirees. For example, the fund could be used to purchase prescription drugs through one administrative agent.

Longevity bonuses could be made to health care workers who remain in employment past age 55. The State could provide an extra $1,000/year to each worker for each year of work past 55.

The State could consider creation of a *statewide hospital pension plan*, which would lower the administrative burden on health care organizations for pension accounting and other pension overhead. A statewide plan would assure portability of benefits for workers who move from employer to employer for career and/or other reasons. For example, according to the New Jersey Division of Pension and Benefits, the following formula is one used to estimate annual pensions for state employees, such as teachers, aged 60 or older:

Years of 'Service / 55	X	*Final Average Salary	=	Annual Retirement Allowance

*Final Average Salary means the average salary for the three years immediately preceding retirement. If the last three years are not the highest years of salary, use the three highest fiscal years (July - June) of salary (Division of Pension and Benefits, 2004).

Nurse staffing and other strategies that retain nurses

The Council heard presentations from three national experts on nursing practice: Drs. Chow, Stefaniak, and McClure. Drs. Chow and Stefaniak are chief nursing officers for large health care systems. Dr. McClure is an expert on nurse retention through her research on magnet hospitals and her experience as a senior administrator in the New York University Medical Center. Dr. McClure also has a background in nursing education as a professor at New York University.

Dr. Stefaniak, the chief nursing officer at the University of Kentucky's Hospital, reviewed the processes and strategies employed at her facility to retain nurses. The University of Kentucky Hospital is a 473-bed facility, supported by a staff of 3,200 health professionals. Located in Lexington, the mission of the University of Kentucky Hospital is to "help the people of the Commonwealth and beyond gain and retain good health through creative leadership and quality initiatives in patient care, education, and research" (U.K. Health Care, 2004). In 2001, the hospital was designated as a Magnet Hospital by the American Nurses Credentialing Center.

Nursing administration at the University of Kentucky Hospital employs a variety of strategies to promote excellence in nursing. Nursing service has an all-RN staff, with 50 percent educated at the associate degree level, and the other 50 percent holding a bachelor's or higher degree. The vacancy rate is six percent, and the hospital is financially sound. Nurses are cross-trained in more than one specialty and may be moved depending upon need. Most nurses work 12-hour shifts; some work 12-hours every weekend and receive full-time pay. The average employment of RNs is 12 years, with the highest attrition occurring in the first three years of employment.

The hospital places value on educating its nurses. For senior nursing students, there is a synthesis program that enhances the students' proficiency upon graduation. Nurse staff educators are master's prepared, and staff development is offered around the clock. A residency program is offered for new BSN graduates, and staff nurses engage in a clinical ladder program that recognizes the experience and education of individual nurses.

At the University of Kentucky Hospital, patient safety is paramount, and nurses use a professional practice model that emphasizes interdisciplinary teamwork and a research base for nursing care. Nurse researchers investigate processes and practice for outcomes, and practices are employed if the evidence supports the practice to promote patient safety and quality of care. Nursing care is assisted by support and communications systems that enable nurses to provide care. For example, the Hospital has a "lift team," consisting of individuals whose primary function is to lift and transfer patients. All nurses communicate with wireless phones and nurse locators.

In 1999, University of Kentucky nursing service leaders established a flexible system of nurse-to-patient ratios that takes into account patient acuity; the experience of the nurses; available support staff; and other patient care dynamics such as transfers, admissions, and discharges. Nursing units use acuity systems that rate each patient two to four times daily. "Bed" meetings are held twice daily to determine nursing needs, and if more nurses are needed to provide care, the hospital calls in RNs from an internal pool. No outside agency nurses are employed. If there is insufficient nursing staff to care for patients, the hospital closes beds.

Dr. Chow discussed the evolution of nurse staffing ratios in California and research findings related to nurse staffing ratios. In California, the evidence in support of minimum ratios was compelling. Dr. Chow reported findings from an RN survey conducted by the Service Employees International Union that found 49 percent of the respondents regularly or often did not have enough time to provide necessary training and education for their patients, and 24 percent said that nurses regularly or often did not have sufficient time to assess and monitor their patients' conditions. Nineteen percent of respondents indicated that patients often experienced misses or delays in treatments and medications because of insufficient staffing

Dr. Chow reviewed the results of a study conducted by the University of California at Davis that consisted of an analysis of 37 research articles on staffing. The study concluded that there was no hard, scientific evidence indicating the specific number of patients that nurses can safely and effectively handle while providing quality care. They reported that increases in the number of RNs are probably associated with reduced in-hospital mortality, reduced rates of pneumonia, decreased lengths of stay, and other patient indicators. The University study also found that increasing the numbers of RNs does not appear to increase institutional costs and may reduce costs when the expenses of adverse patient outcomes are considered. However, the literature does not support a specific minimum nurse-to-patient ratio for nonspecialty units in acute-care hospitals. Furthermore, safety and quality do not rest on numbers alone and a minimum ratio by itself is probably not sufficient to ensure adequate quality of care; other factors, such as skill mix, use of technology, support staff, and nurse competencies, have to be considered in determining optimal patient care.

In 1999, the California Nurses Association (CNA) supported Assembly Bill 394 that required the Department of Health Services to establish minimum licensed nurse-to-patient ratios. This bill was signed into law in 1999. The regulations went into effect January 1, 2004, and require ratios of 1:1 in operating room and trauma (emergency department); 1:2 in critical care, neonatal intensive care, labor and delivery, and perianesthesia; ratios of 1:3 in labor/delivery/postpartum; 1:4 in antepartum, postpartum (couples), stepdown, and pediatrics; 1:5 in telemetry and specialty care; and 1:6 in postpartum (mothers only), medical-surgical, and psychiatry. Concerns have been expressed by the hospital industry that with the nursing shortage, hospitals will be unable to maintain these ratios and may be forced to close beds.

Dr. Chow reported that the 27 hospitals in the Kaiser system voluntarily adopted staffing ratios prior to the implementation of the regulations. Dr. Chow supports staffing ratios as evidenced by the system's

commitment to the establishment of ratios. Furthermore, the Kaiser system has adopted a system implementing a 1:4 ratio of licensed nurses to patients for medical-surgical units.

Dr. McClure focused her remarks to the Council on the relationship between nurses' educational attainment and patient outcomes, and between nurse staffing and patient care outcomes. Aiken et al. (2003) found a relationship between nurse education and lower mortality and '"failure-to-rescue" rates among surgical patients. Linking a cross-sectional analysis of outcomes data for surgical patients from adult general hospitals in Pennsylvania and administrative and survey data, the researchers found that a 10% increase in the proportion of nurses holding a bachelor's degree (or higher) was associated with a 5% decrease in both the likelihood of patients dying within 30 days of admission and the odds of failure to rescue. Only the highest educational attainment of the nurses was sought, and the pre-licensure nursing program completed by individual nurses was not documented.

Dr. McClure also reviewed the research investigating the link between nurse staffing and patient outcomes. This research finds a link between higher numbers of RNs caring for patients to be related to shorter lengths of stay and lower rates of urinary infections, gastric bleeding, pneumonia, shock, and cardiac deaths. Research has also found a link between higher numbers of nurses and fewer deaths from pneumonia, shock, cardiac arrest, overwhelming infection, and deep vein thromboses. Finally, research has indicated that adding one more patient per nurse is linked to an increase by seven percent in the likelihood of dying, a seven percent increase in failure to rescue, a 23 percent increase in burnout and a 15 percent decrease in job satisfaction reported by nurses (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Blegen, Goode, & Reed, 1998; Kovner & Gergen, 1998; Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002; Unruh, 2003).

McClure emphasized that research has not shown unequivocally what the nurse to patient ratio should be, because there are mediating factors that influence the ratio. These include, but are not limited to, support services and technology.

Retention Recommendations

The Advisory Council's recommendations are aimed at retaining all nurses in the workforce, with special consideration of new nurses and more mature nurses, by accomplishing the following: obtaining ongoing comprehensive data about nurses who remain in practice as well as those who leave active practice; assuring that nurses are able to provide safe, quality care; providing adequate financial compensation to nurses; assuring the continuing competence of the nursing workforce; providing for a safe environment for nursing practice; and improving the clinical competencies of new graduates of nursing programs.

Obtaining ongoing data collection and analysis about licensed nurses

Recommendation #1:

Fund an on-going comprehensive survey of Registered Nurses and Licensed Practical Nurses, administered by the NJCCN in collaboration with the New Jersey State Board of Nursing, to measure, monitor, and forecast the supply of New Jersey licensed nurses.

The NJCCN and the New Jersey State BON collaborated on a random sample survey of actively licensed RNs/LPNs in 2002. The data were helpful in providing a database about the RNs and LPNs currently working in New Jersey, and their demographic, educational, and employment characteristics (Dickson, 2003a, 2003b). Current data about the supply of actively licensed New Jersey RNs and LPNs are necessary for ongoing strategic planning for the nursing workforce.

Data also were collected by the Center in 2004 regarding nurses who did not renew their licenses. The report describing the findings can be accessed through the NJCCN web site: www.njccn.org. The proposed comprehensive survey would include both participants who renewed, as well as those who did not renew their licenses.

Data collected on an ongoing basis will allow the State to measure, monitor, and forecast the requirements for the nursing workforce in a similar manner that the National Sample Survey of RNs does at the national level. The New Jersey proposed survey also includes LPNs and provides the State with an opportunity to measure, monitor, and forecast the demand for LPNs, as well as RNs.

Additionally, these surveys contain data about nurses' intentions to leave their current positions, as well as their intentions to leave nursing. Identifying characteristics of nurses at risk of leaving the profession will be helpful in determining strategies to retain nurses in the workforce.

Assuring that nurses are able to provide safe, competent nursing care

Nurse Staffing

Recommendation #2:

Fund and implement a major demonstration project to study the impact of specific nurse-to-patient ratios on patient outcomes in acute care hospitals in those units currently without mandated New Jersey DHSS nurse-to-patient ratios.

Recommendation #3:

Charge the New Jersey DHSS to extend the regulations on nurse-to-patient ratio standards to all patient-care units, both in hospitals and long-term care facilities.

The Council acknowledges that while the IOM report (2004) recommends specific staffing ratios for nursing homes based on research evidence, there are inconclusive research findings for specific ratios for acute-care hospitals. However, the evidence clearly indicates that patient outcomes are correlated positively with sufficient numbers of nurses. Therefore, a demonstration project is recommended that evaluates the impact of differing levels of ratios for non-specialty units to determine the most efficacious ratio of nurses-to-patients. Although a major evaluation study would involve a complex study method and risk-adjusted methodologies, the NJCCN, with adequate funding, could conduct such a demonstration and evaluation project.

Further, as a means to retain nurses, the Council recommends that nurse-to-patient ratios be implemented now based on expert opinion for all licensed nurses (RNs and LPNs) and all types of units not now mandated within hospitals and long-term care. The Council is further recommending that ratios be considered as minimum and not maximum, and that nurse managers use other factors in considering nurse assignments such as the experience of the nurse and the presence of support services.

The Council's staffing ratio recommendations are based on findings from testimony and the expert presentations to the Council. Current New Jersey regulations specify ratios for pediatric intensive care RNs to patients (1:2), postanesthesia care (1:3), newborn nursery (1:8), and critical care (1:3). For all other units, the regulations further specify that nurse staffing assignments be based on patient acuity levels, determined through patient classification systems that address the needs of the nursing unit. In these units, at least one RN must be in charge and assigned exclusively to each patient-care unit on each shift. Additional staff must be assigned by the hospital as required by the patient acuity levels.

Finally, the regulations specify that hospitals have in place contingency plans for assuring adequate nurse staffing at all times and that hospitals should specify the policies and procedures to follow should closure of beds be necessary, if staffing levels fall below specified levels (New Jersey DHSS, 1999).

As indicated earlier in this section, California is the first state to mandate staffing ratios in medical-surgical nursing units of acute-care hospitals. The mandated 1:6 ratios went into effect in January 2004, and the first set of data reviewing the ratios was released in early May 2004. In the first quarter, the California Department of Health Services received 49 complaints of hospitals' failing to meet the staffing ratios. Citations were filed against two facilities. In addition, there were 60 requests for waivers to deal with unexpected high numbers of patients or to create new triage systems. Twenty-nine requests were denied, 23 were approved, and 8 hospitals were told that their requests were not necessary. One hospital shut down as a result of financial problems and the inability to meet the staffing ratios. The remaining 450 hospitals in California have been able to comply with the ratios, although reports indicate that compliance is not consistent every minute of the day (Robertson, 2004). Additional data on the impact of the mandated staffing ratios in California were not available at the time of the writing of this report.

Representatives of the Organization of Nurse Executives/New Jersey on the Council expressed two concerns with regard to this recommendation: (1) that implementing mandated staffing ratios beyond what is now required may have a substantial fiscal impact on hospitals; and (2) with the nursing shortage, employers may not be able to comply with the ratios.

Recommendation #4:

Charge the New Jersey DHSS to collect and analyze data annually that correlates patient-care outcomes with staffing level patterns and skills mix.

The New Jersey DHSS currently does not collect data on patient outcomes and staffing levels because of methodological concerns about the validity of measures used to associate outcomes and staffing. The Quality Improvement Advisory Committee has chosen to use the JCAHO/CMS indicators that the National Quality Forum has been promoting. JCAHO is the Joint Commission for the Accreditation of Healthcare Organizations and CMS is Centers for Medicare and Medicaid Services. Until such time as the methodological concerns have been addressed, to collect data on outcomes and staffing would be labor intensive for both the hospitals and the DHSS, and the information that would be obtained might be of questionable value (M. Dahl, written communication, May 7, 2004).

Competence of the nursing workforce

Recommendation #5:

Provide incentives to employers and academic institutions to establish residency programs to promote the smooth transition of new graduate nurses from academia to service.

Recommendation #6:

Provide subsidies for institutions to establish mentorship programs for new nurses in order to support and encourage new nurses to continue practicing in New Jersey.

Recommendation #7:

Provide incentives to institutions to develop residency programs to promote the smooth transition of nurses across service settings.

Competence is defined as "the application of knowledge and the interpersonal, decision-making, and psychomotor skills expected for the nurse's practice role, within the context of public health, welfare and safety" (National Council of State Boards of Nursing [NCSBN], 1999). The IOM report (2004) describes the context in which health care is delivered as one characterized by continual expansion of knowledge, drugs, and technology to diagnose and treat disease. Furthermore, the report states that experienced practitioners must work diligently to maintain currency and expertise. Beginning practitioners in nursing and medicine do not possess the knowledge and skills needed for safe, competent practice.

The State can develop a competitive program for grants to health care institutions that form partnerships with nursing academic institutions to develop residency programs for senior students to ease the transition of the graduate from the culture of education to the culture of the workplace. Such competitive grants could be offered through a State agency such as the Department of Health and Senior Services or the Division of Consumer Affairs.

In a similar manner, competitive grants could be offered to employers of nurses to extend successful, innovative programs of mentorship for young nurses. The outcomes measures of such programs would include the reduced turnover of new graduate nurses, increased longevity of new graduate nurses in hospital nursing, and reduction in stress and anxiety levels of new nurses as measured by reliable metrics.

There is evidence to support the cross-training of nurses in more than one specialty area as a means of retaining nurses with increased satisfaction in their practice of nursing (K. Stefaniak, presentation to the Advisory Council, October 28, 2004l). Small competitive grants could be offered through a State department to hospitals that propose to develop a pilot project of new specialty training for employed nurses. The grants would include replicable outcomes and a strong evaluative component demonstrating a reduced rate of turnover and increased retention of experienced nurses.

Recommendation #8:

Encourage health care facilities to acquire continuing education provider status when the New Jersey State Board of Nursing institutes mandatory continuing education unit requirements.

State boards of nursing have traditionally verified the competence of beginning practitioners through the licensing examinations. However, the changes and complexities of health care require that nurses and other health professionals update and maintain their knowledge and skills needed to practice safely. One of the key questions related to continued competence is how to assess, measure, and verify competence so that patients can be reasonably assured that their care providers are competent to provide care.

Absent periodic testing of competence or other standardized statewide procedures, 24 states and jurisdictions mandate continuing education to verify competence. In these states, nurses must earn a designated number of continuing education hours or credits in order to maintain their licenses. In New Jersey, the Board of Nursing approved continuing education regulations (*N.J.A.C.13*:37-53) on May 18, 2004. The regulations will require each applicant for biennial license renewal to complete a minimum of 30 hours of continuing education during the preceding biennium. This requirement is proposed to become effective for licensees whose licenses expire on May 31, 2006, for the 2008 renewal of licensure, and for those licensees whose licenses expire on May 31, 2007, for the 2009 renewal of licensure (G. Hebert, personal communication, May 28, 2004). In the interim, organizations should begin the process of applying for continuing education provider status so that when the regulations go into effect, the organizations will be poised to offer continuing education to their employees and others. This will not only enhance the practice of nurses, but will also act as a retention, and/or a recruitment, tool for employers.

Documentation

Recommendation #9:

Support a mandate to require system-wide adoption of information technology that reduces redundancy in documentation and promotes error reduction in organizations.

Recommendation #10:

In order to eliminate duplication in documentation, mandate that all agencies/providers establish Medicare documentation guidelines/requirements as the standard for documentation.

In testimony, Council members heard nurses express frustration at the amount of time spent in documentation. The IOM (2004) report on work environment described the documentation burden on nurses and the percentage of time taken away from direct care by multiple documentation requirements from the employing institution to federal, state and insurance regulations.

Further, the Council recommends that a concerted effort be taken to standardize and simplify the documentation process by mandating that all agencies/providers establish the Medicare documentation guidelines/requirement as the standard for documentation. The standardization would eliminate redundancy and reduce the time nurses now spend in documentation of care to meet differing standards.

Providing adequate financial compensation

Recommendation #11:

Develop a state-supported pension plan system for nurses, similar to educators, which affords portability and ensures employer contribution.

The Council heard testimony and a presentation from a representative of the American Federation of Teachers. Testimony focused on the inadequacy of current pension plans to provide sufficient resources for retired nurses. The lack of funding was seen as a disincentive for both the recruitment and retention of nurses. The Council recommends that a statewide defined-benefit pension system be established that provides adequate benefits and portability, that allows for all health care organizations to participate, and that includes a retiree health insurance component. Such a system might encourage nurses to stay in New Jersey and to work more hours and to work longer to enhance their eligibility for increased benefits.

A current bill, Assembly bill A2425/S1337, establishes a Commission to investigate the possibility of establishing a State supported defined-benefit pension plan for health care workers. It has been introduced in the Assembly and released from the Assembly Labor Committee. A similar bill is in the Senate Labor committee.

Providing for a safe work environment for nurses to practice.

Recommendation #12:

Establish regulations supporting no-tolerance policies on violence against health care workers.

Recommendation: #13:

Establish third-party reimbursement provisions for safety escort services for nurses providing home care in areas where these services are required.

The Council heard testimony on the dangers to home care nurses who travel in high-crime areas and/or situations in which there are unstable family or environmental dynamics. Violence of any kind against workers should not be tolerated. The State can establish regulations that support a no-violence policy and hold agencies accountable for setting into place methods to assure that violence is not tolerated. The State should consider developing policies to provide for the safety of these nurses and the means to reimburse safety escort services. Data suggest that escort services may increase the cost per visit from 30 to 75 percent; however, without the provision of these services, needed home care services may be adversely affected (M.A. Christopher, personal communication, May 25, 2004).

Financing alternative and effective methods of nursing care delivery

Recommendation #14:

Provide reimbursement to Home Health Agencies to extend nursing care through the use of tele-health visits to replace traditional home visits, where appropriate.

Given the predictions for a diminishing supply of nurses, finding ways to improve efficiencies in the delivery of nursing care makes sense, at least in terms of conserving human resources. The appropriate use of technology to provide health services is one strategy to increase access as well as the productivity of nurses. Conducted in a person's home, tele-homecare is a "clinical information system that enables the interaction of voice, video, and data using ordinary telephone lines" (Dansky, Bowles, & Palmer, 2003). New Jersey home health agencies are not reimbursed for the services provided with tele-monitoring equipment despite the research findings indicating that these methods have superior patient outcomes and are cost efficient. The Council recommends funds be made available to reimburse home health agencies for these services.

Chapter VII: Conclusion

A sufficient supply of New Jersey nurses is essential to the health care of its residents. Without adequate numbers of educated, experienced nurses, persons needing nursing care may suffer adverse health outcomes that will negatively impact both mortality and morbidity rates, as well as increase the overall cost of health care due to such challenges as staff retention and maintaining a stable, satisfied workforce. Predictions about the supply of, and demand for, New Jersey nurses indicate that unless aggressive actions are taken, the shortage of RNs will exceed 35,000 by 2020, a shortage of 43% of the predicted requirements for an adequate RN workforce. Although the Council recognizes the importance of LPNs and nursing ancillary staff to quality care and safety, similar data about LPNs and ancillary staff are not available now.

Acknowledging the national concerns about the safety of patients and a nursing shortage, the Council met the challenge, consistent with the charge of Executive Order 139 (2002), to form recommendations for the Governor to include: implications of a long- and short-term nursing shortage; nursing education; recruitment of nursing students; retention of nurses in the workplace; and the results of research-based solutions.

Suggestions for the retention of nurses in the workplace received the most attention in the three statewide public hearings that were held. Retention suggestions totaled 120, while education drew 50 suggestions, and recruitment suggestions numbered 76. Of the 12 priority recommendations developed by the Council, six focused on the retention of nurses in the workplace, three on nursing education, and three on the recruitment of nurses into the profession.

The Council initially formulated 29 recommendations, which included 12 that were ranked with priority by the Council. Although all 29 have been included in this report, only the 12 ranked with priority by the Council are included here. Further, recommendations are classified in descending order by highest, very high, or high priority.

HIGHEST PRIORITY - The following four recommendations are offered as the highest priority. These indicate that, above all others, executive, legislative, or regulatory action should be taken immediately to address these recommendations to:

Establish a statewide nursing curriculum model that provides standardized subjects and sequences among the associate degree nursing programs (education)

Fund a recruitment specialist/marketing person or team to promote nursing in conjunction with, or delegated to, the New Jersey Collaborative Center for Nursing (NJCCN) (recruitment)

Fund and implement a major demonstration project to study the impact of specific nurse-to-patient ratios on patient outcomes in acute care hospitals in those units currently without mandated New Jersey DHSS nurse-to-patient ratios (retention)

Charge the New Jersey DHSS to extend the regulations on nurse-to-patient ratio standards to include all patient care units, both in hospitals and long-term care facilities (retention).

VERY HIGH PRIORITY - The Council recommends the next three as having very high priority urging prompt executive, legislative, and/or regulatory action be taken to:

Subsidize nursing faculty salaries so that they are comparable with health care industry standards for nursing employees with comparable education and experience (education)

Promote nursing within the one-stop career centers administered through the New Jersey Department of Labor and in collaboration with the NJCCN (recruitment)

Develop a State-supported, defined pension plan system for nurses, similar to that in place for educators, which affords portability and ensures employer contribution (retention).

HIGH PRIORITY - The Council puts forth the following recommendations with high priority for consideration of executive, legislative, and/or regulatory action to be taken to:

Institute State-sponsored scholarships for nursing students at all levels and loan forgiveness programs for new nursing graduates working in New Jersey (recruitment)

Provide incentives to employers and academic institutions to establish residency programs to promote the smooth transition of new graduate nurses from academia to service (retention)

Establish a commission to investigate the granting of the Bachelor of Science in Nursing (BSN) degree by community colleges (education)

Fund an ongoing comprehensive survey of Registered Nurses and Licensed Practical Nurses, administered by the NJCCN in collaboration with the New Jersey Board of Nursing, to measure, monitor, and forecast the supply of New Jersey licensed nurses (retention)

Encourage health care facilities to acquire continuing education provider status when the New Jersey Board of Nursing institutes mandatory continuing education unit requirements (retention).

The recommendations are presented without a cost analysis for their implementation. Some of the recommendations may have immediate cost implications for the State or the health care industry; however, others may have financial benefits for some organizations. Importantly, implementing these recommendations will result in the improved quality and safety of patient care. These recommendations call for change in nursing education, as well as change in the work environment of nurses.

The Council is cognizant of current bills introduced into the legislature that are focused on some of these issues; e.g., student scholarships, tax waivers, staffing ratios, disclosure to patients, a pension commission, specialty training, and an alternative-to-discipline program. The implementation of these bills could address aspects of the recommendations put forth by the Council.

Nurses, as the glue that holds the health care system together, now have the opportunity to play a major role in defining nursing care. With prompt action in both public and private sectors, New Jersey can put in place action initiatives that will solve, or at least substantially minimize, key current and future obstacles, such as how to: recruit adequate numbers of qualified individuals into the profession, educate them to work within the dynamic and complex health care delivery system, and retain them within the profession.

Prompt action by New Jersey will further serve as a public policy model for other states, which are also grappling with similar issues as part of this severe – and historically unique – national nursing shortage.

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State of New Jersey
Executive Order #139
Acting Governor John O. Bennett

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WHEREAS, this State is experiencing a critical shortage in its nursing workforce; and

WHEREAS, a shortage of 14,000 registered nurses and 3,800 licensed practical nurses is forecasted for 2006 and, by 2020, the shortage may be over 24,000 registered nurses; and

WHEREAS, a number of factors are contributing to the shortage, including the delivery of more care in outpatient settings, shorter lengths of stay in acute and long-term care settings, and the development of alternatives to nursing home care; and

WHEREAS, these changes have resulted in more employment options for nurses that make it difficult for employers to recruit and retain qualified nursing personnel; and

WHEREAS, the current shortage is expect to worsen as nursing school enrollments continue to decline and a significant number of nurses retire over the next decade; and

WHEREAS, the multifaceted nature of these problems necessitates that all interested and affected parties cooperate and collaborate in the development of solutions;

NOW, THEREFORE, I, JOHN O. BENNETT, Acting Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. The Advisory Council to Promote the Profession of Nursing in New Jersey is hereby established as set forth in this Order. The Advisory Council shall consist of 16 members as follows:

    a. Five non-voting ex officio members, including the chair and vice chair, appointed by the Governor, which shall include the Commissioners of Health and Senior Services, Human Services, Education and Labor and the Executive Director of the New Jersey Board of Nursing in the Division of Consumer Affairs in the Department of Law and Public Safety, or their designees;

    b. Seven public members appointed by the Governor, which shall include one nurse upon the recommendation of the New Jersey State Nurses Association, one nurse upon the recommendation of the Licensed Practical Nurses Association of New Jersey, Inc., two nurses upon the recommendation of the Organization of Nursing Executives of New Jersey, one nurse educator teaching or administering an A.D. program, one nurse and one nurse educator teaching or administering a B.S.N. program, and one nurse educator teaching or administering a diploma school program;

    c. Two members appointed by the President of the Senate, who shall be of different political parties and who shall be actively involved in nursing services; and

    d. Two members appointed by the Speaker of the General Assembly, who shall be of different political parties and who shall be actively involved in nursing services.

2. The Advisory Council shall assist the Governor in proposing legislation and its recommendations shall be based upon the following objectives:
   a. The recommendations must include a determination of the current extent and long-term implications of the growing shortage of nursing personnel in the State;
   b. The recommendations must relate to the education, recruitment and retention of qualified nursing personnel in New Jersey; and
   c. The recommendations must evaluate mechanisms currently available in the State and other states that are intended to enhance the education, recruitment and retention of nurses in the workforce.
3. The Advisory Council shall present its recommendations on or before September 1, 2002.
4. The Advisory Council is authorized to call upon any department, office, division, or agency of State government to provide such information, resources or other assistance deemed necessary to discharge its responsibilities under this Order. Each department, office, division and agency of this State is hereby required to cooperate with the Advisory Council and to furnish it with such information, personnel and assistance as is necessary to accomplish the purposes of the Order.
5. The Advisory Council shall hold at least three public hearings as it discharges its responsibilities under this Order.
6. This Order shall take effect immediately.

GIVEN, under my hand and seal
this 9th day of January in the Year
of Our Lord, Two Thousand and Two
and of the Independence of the
United States, the Two Hundred
and Twenty-Sixth.

/s/ John O. Bennett
Acting Governor

[seal]

Attest: /s/ James A. Harkness
Chief Counsel to the Governor

State of New Jersey
Executive Order #141
Acting Governor Richard J. Codey

WHEREAS, Executive Order No. 139(2002) created the Advisory Council to Promote the Profession of Nursing in New Jersey; and

WHEREAS, the Advisory Council consists of 16 members, five non-voting, ex officio members, seven public members appointed by the Governor, two members appointed by the President of the Senate, and two members appointed by the Speaker of the General Assembly; and

WHEREAS, the membership of the Advisory Council would be enhanced by adding four members of the New Jersey Legislature who possess experience with the issues to be addressed by the Advisory Council;

NOW, THEREFORE, I RICHARD J. CODEY, Acting Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. The Advisory Council to Promote the Profession of Nursing in New Jersey established by Executive Order No. 139(2002) will add the following four members:

   One member appointed by the Speaker of the General Assembly to be selected from among Assemblymembers in the majority party, one member appointed by the General Assembly Minority Leader to be selected from among Assemblymembers in the minority party, one member appointed by the President of the Senate to be selected from among Senators in the majority party, one member appointed by the Senate Minority Leader to be selected from among Senators in the minority party.

2. This Order shall take effect immediately.

GIVEN, under my hand and seal
this 14th day of January in the Year
of Our Lord, Two Thousand and Two
and of the Independence of the
United States, the Two Hundred
and Twenty-Sixth.

/s/ Richard J. Codey
President of the Senate, Acting Governor

[seal]

State of New Jersey
Executive Order #142
Acting Governor Richard J. Codey

WHEREAS, Executive Order No. 141(2002) added four members to the Advisory Council to Promote the Profession of Nursing in New Jersey, which was established pursuant to Executive Order No. 139(2002); and

WHEREAS, the members added pursuant to Executive Order No. 141(2002) are members of the New Jersey Legislature; and

WHEREAS, the Advisory Council will make legislative recommendations to the Governor to address the critical shortage in New Jersey's nursing workforce, and as a result, the Legislative members of the Advisory Council should be non-voting members;

NOW, THEREFORE, I, RICHARD J. CODEY, Acting Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. The member appointed by the Speaker of the General Assembly to be selected from among Assemblymembers in the majority party, the member appointed by the General Assembly Minority Leader to be selected from among Assemblymembers in the minority party, the member appointed by the President of the Senate to be selected from among Senators in the majority party, and the member appointed by the Senate Minority Leader to be selected from among Senators in the minority party shall be non-voting members.

2. This Order shall take effect immediately

GIVEN, under my hand and seal

this 15th day of January in the Year

of Our Lord, Two Thousand and Two

and of the Independence of the

United States, the Two Hundred

and Twenty-Sixth.

/s/ Richard J. Codey

President of the Senate, Acting Governor

NEW JERSEY SCHOOLS OF NURSING

BACHELOR'S of SCIENCE in NURSING

Bloomfield College
Bloomfield, NJ

College of New Jersey
Ewing, NJ

College of St. Elizabeth
Morristown, NJ

Fairleigh Dickinson University
Teaneck, NJ

Felician College
Lodi, NJ

Kean University
Union, NJ

New Jersey City University
Mt. Laurel, NJ

Monmouth University
West Long Branch, NJ

Richard Stockton College of New Jersey
Pomona, NJ

Rutgers, The State University of New Jersey
Camden, NJ

Rutgers, The State University of New Jersey
Newark, NJ

Saint Peters College
Jersey City, NJ

Seton Hall University
South Orange, NJ

Thomas Edison State College
Trenton, NJ

University of Medicine & Dentistry of New Jersey
Newark, NJ

William Paterson University
Wayne, NJ

ASSOCIATE DEGREE PROGRAMS

Atlantic Cape Community College
Mays Landing, NJ

Bergen Community College
Paramus, NJ

Brookdale Community College
Lincroft, NJ

Burlington County College
Pemberton, NJ

Cumberland County College
Vineland, NJ

Essex County College
Newark, NJ

Gloucester County College
Sewell, NJ

Mercer County Community College
Trenton, NJ

Middlesex County College
Edison, NJ

County College of Morris
Randolph, NJ

Ocean County College
Toms River, NJ

Passaic County Community College
Paterson, NJ

Raritan Valley Community College
Somerville, NJ

DIPLOMA PROGRAMS

Bayonne Hospital School of Nursing
Bayonne, NJ

BonSecours Canterbury School of Nursing at Christ Hospital
Jersey City, NJ

Capital Health Systems School of Nursing
Trenton, NJ

Charles E. Gregory School of Nursing
Perth Amboy, NJ

Helene Fuld School of Nursing
Blackwood, NJ

Holy Name Hospital School of Nursing
Teaneck, NJ

Mountainside Hospital School of Nursing
Montclair, NJ

Muhlenberg School of Nursing
Plainfield, NJ

Our Lady of Lourdes School of Nursing
Magnolia, NJ

St. Francis Medical Center School of Nursing
Trenton, NJ

Trinitas School of Nursing
Elizabeth, NJ

LICENSED PRACTICAL NURSE PROGRAMS (LPN)

Atlantic County Vocational & Technical School
Mays Landing, NJ

Burlington County Technical Institute
Medford, NJ

Camden County Technical School
Sickerville, NJ

Cape May County Vocational & Technical School
Cape May, NJ

Cumberland County Technical Education Center
Bridgeton, NJ

Essex County College
Newark, NJ

Essex County Vocational Technical Schools
Newark, NJ

Holy Name Hospital School of Practical Nsg
Teaneck, NJ

Jerrothia Riggs Adult Education Center
Camden, NJ

Mercer County Technical Schools
Trenton, NJ

Micro TECH Training Center
Jersey City, NJ

Middlesex County Vocational & Technical School
East Brunswick, NJ

Monmouth County Vocational School
West Long Branch, NJ

Morris County Vocational School
Denville, NJ

New Community Workforce Development Center
Newark, NJ

Ocean County Vocational & Technical School
Lakehurst, NJ

Passaic County Technical and Vocational High School
Wayne, NJ

Salem Community College
Carney's Point, NJ

Somerset County Vocational Technical School
Bridgewater, NJ

Southern New Jersey Technical Schools
Woodbury, NJ

Union County College
Plainfield, NJ

Vineland Adult Education Center
Vineland, NJ

Warren County Technical School
Washington, NJ