NATIONAL ADVISORY COUNCIL ON NURSE EDUCATION AND PRACTICE

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FIRST REPORT TO THE SECRETARY OF HEALTH AND HUMAN SERVICES AND THE CONGRESS

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Kansas City, Kansas

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East Central University
Ada, Oklahoma

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Department of Behavioral and Community Health, School of Nursing
University of Maryland
Baltimore, Maryland

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University of New Mexico
Albuquerque, New Mexico

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Bureau of Health Professions
Health Resources and Services Administration
Rockville, Maryland

EXECUTIVE SUMMARY

The National Advisory Council on Nurse Education and Practice (NACNEP), in this first report to the Secretary of Health and Human Services and the Congress, provides an overview of its activities and its perspectives on the nursing workforce, education and practice improvement. The report is called for under the responsibilities outlined for NACNEP in the legislation reauthorizing Title VIII, *Nurse Education and Practice Improvement Act of 1998* (P.L. 105-392) (http://www.thomas.loc.gov).

NACNEP undertook its tasks as the health care system continues to evolve. Registered nurses (RNs) are essential to the many dimensions of health care, well beyond direct patient care. They practice in all the varied types of settings providing health care and in a variety of capacities in addition to providing direct patient care. Access to health care services is dependent on having an adequate supply of RNs who are the core staff for these services both in and out of hospital settings. An aging nurse workforce and a decreasing student body contribute to the RN shortage of today and in the future.

NACNEP's Activities

Since undertaking the responsibilities called for in the November 1998 legislation, NACNEP completed three major activities by 2000 concerning the use of Federal financial resources for nursing education, improving the substantial disparity between the diversity of the RN population, and, in partnership with the Council on Graduate Medical Education, improving patient safety through interdisciplinary education and practice. NACNEP, most recently, addressed the nationwide concerns of a current and future nursing shortage by devoting its last two meetings to obtaining perspectives on the shortage issues from experts in the field and representatives of 16 national nursing organizations. As a result of its examination, NACNEP prepared a policy document stressing the immediacy and critical importance of the shortage issue. The document provides NACNEP's strategies to help reverse this severe and complex evolving nursing shortage, including approaches to strengthening the effect of the provisions under Title VIII legislation.

View of the Current State of Nursing

The report points out that today's RNs are practicing in a far more complex environment than in the past brought about by continuing changes in delivery of health care; rapid advances in technology, drug therapy, and equipment; increasing number of older adults with multiple chronic conditions, and expanding diversity of the country's residents. The changing environment for nursing practice raises a multiplicity of workforce, education, and conditions of practice issues.

Workforce. A slower growth rate in size of the RN workforce and the continuing aging of this workforce are accompanied by significant decreases in the number of entrants into nursing education programs that prepare individuals to become RNs. Barring significant changes in the flow of entrants into nursing, projections show that the supply of RNs will decline within about 10 years and that, by 2020, the RN workforce will be 20 percent below projected requirements. Significant disparities still exist between the diversity of the RN population and that of the country's population. Increasing numbers of RNs from minority backgrounds is a prime consideration in reducing the substantial racial and ethnic disparities in health. Nursing remains an overwhelming female occupation. In the face of continually expanding opportunities for women in other occupations, it is critical to develop recruitment strategies to recruit men as well as women into nursing. Promoting nursing as an economically attractive career is necessary for increasing its competitive standing as a career choice.

Education. Today's increased complexity of care demands a better educated RN. All levels of RNs have an important role to play in the evolving health care system. Baccalaureate education with its broader, more scientific base provides the sound foundation for the variety of nursing positions and for entry to advanced nursing education and practice. The majority of today's RNs are educated at less than the baccalaureate level. Dramatic efforts are needed to meet the NACNEP target for a 2/3 BSN-prepared nursing workforce by 2010. Only 10 percent of today's nurse workforce has graduate education at the master's or doctoral level.

Graduate education provides the advanced knowledge necessary for specialized nursing and health care; managing and directing nursing in the varied complex clinical care settings, and educating the next generation of nursing students. Nursing education programs, from practical nursing to doctoral nursing education, employed 46,655 RNs, not all of who had the appropriate level graduate education. Furthermore, the average age of nurse educators in 2000 was 49.4 years. Of particular significance is the competition between the nursing education programs and the clinical and administrative areas of health services organizations for the relatively scarce number of RNs with advanced degrees.

Practice Improvement. Changes in the organization of the health care system have affected the distribution of nursing positions. Expanding opportunities for RNs have led to far greater growth rates in RN employment in settings other than hospitals. Hospitals, however, are still the predominant RN employment setting, employing 59 percent of the RNs. Increasingly, media from all parts of the country carry stories about difficulties in recruiting RNs for vacant nursing positions. In addition to these reports, data from a number of national and State studies reveal significant shortages. Most of these reported data focus on hospital difficulties. Along with the media reports of vacant hospital nursing positions are the reports of nurse dissatisfactions with their conditions of work including staffing levels that are insufficient for providing appropriate care to patients and mandatory overtime that exacerbate the unsafe practice conditions. Furthermore, the increasing RN age level requires consideration of the work structure needs of older workers and of approaches to attracting and retaining nurses in positions of particular stress that are usually filled by RNs from the younger age cohorts.

NACNEP believes that the issues concerning the size and composition of the workforce; the nurse educational system and the work environment identify matters for consideration in affecting the current and future critical nursing shortages. These must be addressed to ensure the availability of the size and quality of the RN workforce necessary for the nation's health care service requirements.

Title VIII Contributions

Federal support for nursing education and practice under Title VIII spans almost forty years. Funding through this mechanism has resulted in major contributions to the health care available to the country's population. The report demonstrates how the available, though limited, funds have been used for the development of numerous innovative approaches to enhancing nursing's ability to address new and emerging health care issues, provide care to the underserved, and recruit into nursing minority and other individuals from disadvantaged backgrounds. Current levels of funding are woefully inadequate to accomplish all the clearly indicated objectives of the Title VIII legislation. Continued funding, at least at the current levels, is essential but, also, it is important that assessments be made of the availability of necessary funds to meet arising critical needs in the development of an appropriate nurse workforce.

Conclusions and recommendations

NACNEP, in undertaking its responsibilities since the enactment of the 1998 legislation, specifically targeted aspects that affect Federal policy matters and those for which the Federal government can be particularly instrumental in affecting change although recognizing that change can only take place through concerted activities of all partners involved. It sees, however, a distinct leadership role for the Federal government through Title VIII and other Federal government vehicles that fund nursing education and nursing services. To that end, NACNEP reiterates the conclusions and recommendations contained in reports of the projects it undertook during the period. NACNEP presents thirteen recommendations in response to the severity of the current and impending future nursing shortage and its implications for the nation's ability to provide its residents with health care from an adequate and qualified nurse workforce.

I. INTRODUCTION

The nation's economy is closely aligned with the health of the nation's population. The United States, in 1999, spent 13 percent of its gross domestic product on activities promoting good health and providing care to ensure the continuance of a healthy population. Changes in health care financing have led to radical changes in the way the system is constructed and the sites in which care is delivered. These activities take place within the context of an expanding and more diverse population characterized by an increase in the proportion of older adults with chronic conditions.

In this first report on its activities to the Secretary of Health and Human Services and Congress, called for under the *Nurse Education and Practice Improvement Act of 1998* (P.L. 105-392) (http://www.thomas.loc.gov), the National Advisory Council on Nurse Education and Practice (NACNEP) provides an overview of its activities and its perspectives on the nursing workforce, education and practice improvement.

Registered nurses (RNs) are **essential to the many dimensions of health care, well beyond direct patient care.** Contrary to popular perceptions, nurses practice in a variety of settings and capacities, both within and outside hospitals. They fulfill multiple roles in the broad health care enterprise. In addition to functioning in the hospital inpatient arena, RNs practice in outpatient and ambulatory care clinics, day surgeries, health departments and school systems, long term care facilities, home health care services, primary care centers and clinics, telephone counseling services, prison systems, the Department of Veterans Affairs, the military and managed care organizations. In addition to providing direct patient care, RNs are in administrative and supervisory roles, and are also in demand to manage quality assurance programs, conduct utilization review, coordinate clinical trials, design and deploy information systems and provide case management services.

RNs with advanced preparation provide specialized patient care as clinical nurse specialists, nurse practitioners, nurse anesthetists, and nurse midwives. Many with advanced preparation are employed as faculty in schools of nursing, as scientists in universities and biomedical research organizations and as administrators of health care organizations.

RNs are the most widely dispersed professionals in health care settings as well as the **most flexibly deployed** because of their broad knowledge and experience base. Access to health care services is dependent on having an adequate supply of **registered nurses who are the core staff for these services** both in and out of hospital settings. While nursing remains primarily a female-dominated profession, increased opportunities for women in other professions threaten the availability of RNs to staff health care services. An aging nurse workforce and a decreasing nursing student body contribute to the RN shortage of today and in the future.

As the health care delivery system has changed and evolved, the delivery of nursing and health care have become increasingly complex. This is due in part to a shift from hospital-based to community-based care. The increased acuity of patients in all settings and shorter lengths of stay in hospitals coupled with the expanding use of technologies in diagnosis and management have created a need for well-prepared RNs who can provide and manage complex clinical care in varied settings.

Quality and safety of care are growing concerns nationally. Spearheaded by the Institute of Medicine's release of a report on the prevalence of preventable medical errors, considerable efforts on the part of both public and private agencies and institutions are going into studying, developing and initiating monitoring systems to enhance the care being provided. RNs often are the monitors for systems' gaps. RNs represent the primary surveillance system for patients in hospitals 24 hours a day.

RNs make a positive difference in the outcomes of a stay in the hospital. A recently completed study showed that higher RN staffing was associated with a 3 to 12 percent reduction in certain adverse outcomes such as urinary tract infection, pneumonia, shock and upper gastrointestinal bleeding. The study, carried out by the Harvard School of Public Health under a contract with the Health Resources and Services Administration Division of Nursing and co-sponsored by the Health Care Financing Administration, the Agency for Healthcare Research and Quality and the National Institute of Nursing Research, was developed in response to Congressional and Departmental concerns about nurse staffing and the outcomes of care. Reductions in complications arising in a hospital stay reduce risk to the patients and the use of costly resources.

Since undertaking its responsibilities under P.L.105-352, NACNEP focused its attention on a number of issues including patient safety; the composition and quality of the nursing workforce, including its continuing concerns about inadequate diversity in the workforce, and the financing of nursing education. In carrying out these latest activities, NACNEP built on its previous studies of the roles of nurse practitioners and clinical nurse specialists and their importance to the provision and enhancement of the health care of the population as well as its study of the initiatives necessary to more adequately prepare nurses to use technology in their education and practice.

II. THE MANDATES OF THE NATIONAL ADVISORY COUNCIL ON NURSE EDUCATION AND PRACTICE

NACNEP is a legislatively mandated body that provides advice and recommendations to the Secretary of Health and Human Services and the Congress on Federal policy matters specifically related to nursing. A national advisory council for nursing was initially established under legislation in 1964 to provide advice in connection with the administration of the funding for nursing education under Title VIII of the Public Health Service Act. Much of the work in the earlier years of the council was devoted to reviewing the proposals for funding under the various programs and advising on the policies and regulations for the Nurse Training Act.

In the 1992 legislation reauthorizing Title VIII (P.L. 102-408) (http://www.thomas.loc.gov), the council was renamed the National Advisory Council on Nurse Education and Practice in recognition of the need to look beyond education to practice. NACNEP's activities continued to evolve over the 37 years of its existence. The 100th meeting of the council occurred in November 1999. In recognition, the Secretary of Health and Human Services addressed the council and a reception was held in her office. NACNEP, over the years of its existence, increasingly became involved in broader workforce issues and advising on how the Federal government could contribute to advancing the health care of the United States population through the development of an adequate, qualified registered nurse workforce.

The legislation reauthorizing Title VIII enacted in November 1998 (P.L. 105-392, the Nurse Education and Improvement Act of 1998) continued NACNEP with these two Title VIII responsibilities:

> (1) provide advice and recommendations to the Secretary and Congress concerning policy matters arising in the administration of this title, including the range of issues relating to the nurse workforce, education, and practice improvement; and

(2) provide advice and recommendations to the Secretary and Congress in the preparation of general regulations with respect to policy matters arising in the administration of this title, including the range of issues relating to nurse supply, education and practice improvement.

The legislative requirements also call for NACNEP to provide its first report on its activities and findings and recommendations related to these activities to the Secretary and the Congress 3 years after the date of enactment and annually, thereafter.

NACNEP examined its current set of responsibilities and, in February 2000, established a Strategic Plan with goals and objectives to guide its responses to existing and emerging workforce issues related to distribution, diversity, quality and safety, and access to nursing education and practice. The goals took into account the need to examine both the quality and the quantity of the nursing workforce including its educational underpinning and the need to support the furtherance of interdisciplinary education and practice through collaborative activities with other disciplines.

NACNEP undertook four major activities in pursuit of its goals:

- NACNEP, in a communication to the Medicare Payment Advisory Commission dated August 11, 2000, called for a redirection of the Medicare funds for nursing education from supporting hospital-based diploma programs. The council recommended that the funds be used to provide support for baccalaureate and higher degree nursing education programs pointing out that these educational programs prepare the nurses who are best qualified to care for the elderly.

- NACNEP examined the substantial disparity between the diversity of the RN population and that of the population as a whole. Its report to the Secretary and the Congress, entitled *A National Agenda for Nursing Workforce: Racial/Ethnic Diversity (2000)* (http://www.bhpr.HRSA.gov/nursing), points out that a culturally

diverse workforce is essential to meeting the health care needs of the population. The report is a call to action containing a series of policy goals and actions for the many organizations and agencies, both public and private, necessary to remedy the significant underrepresentation of racial/ethnic minorities in the RN workforce.

- NACNEP, in partnership with the Council on Graduate Medical Education (COGME), examined collaborative approaches to reducing medical errors and enhancing patient safety. A subgroup of members from the two councils met to develop the plans for a joint meeting held on September 13-14, 2000 at which the councils heard from experts on interdisciplinary nursing and medical education and practice and patient safety. The report to the Secretary and the Congress, *Collaborative Education to Ensure Patient Safety* (http://www.bhpr.HRSA.gov/nursing) contains the presentations from the meeting, an extensive annotated bibliography on nurse-physician collaboration in practice and the two councils' joint recommendations for actions to foster interdisciplinary education and safe practice in the management of health care and the treatment of the population.

- NACNEP, most recently, addressed the nationwide concerns of a current and future nursing shortage. The last two meetings of the council were devoted to the shortage issue. The first meeting focused on national and regional experts providing their data and evaluations of the current and future state of the availability of nursing resources. At the second meeting, 16 national nursing organizations presented their perspectives of the current situation and their suggested solutions (see *Invited Comments from National Nursing Organizations Before the NACNEP*, April 26, 2001). These activities resulted in the NACNEP policy document, *Nursing: A Strategic Asset for the Health of the Nation* (forthcoming on the Division of Nursing web site, http://www.bhpr.hrsa.gov/nursing). The document stresses the immediacy and critical importance of the shortage issue. It provides recommendations stating the council's strategies to help reverse this severe and complex evolving nursing

shortage, including approaches for strengthening the effect of the provisions under the Title VIII legislation.

Other on-going and emerging activities of NACNEP include the following:

- NACNEP during the initial developmental stages of the funding methodology called for in the Title VIII legislation held discussions with the contractor for the first phase of the project at its November 1999 and April 2000 meetings. It continues to be represented in activities related to the funding methodology for Title VIII. The latest reauthorization of Title VIII (P.L. 105-392) allows for flexibility in the spending of the overall appropriations among and within the three major parts, advanced education, increasing nursing workforce diversity and basic nurse education and practice. Before this funding flexibility can take place, the law requires that a funding methodology be developed with consultation from the field of nursing. A Funding Allocation Consultation Panel of representatives from nursing organizations provided input into the development process. A NACNEP representative participated on this Panel. During the second phase of the process, NACNEP will continue to have representation on an expert panel that will consult with the contractor developing the implementation of the funding allocation methodologies that were recommended.

- NACNEP is partnering with COGME to advance their work on patient safety. The Institute of Medicine (IOM) Committee on Quality of Health Care in America, in its report entitled *Crossing the Quality Chasm: A New Health System for the 21st Century*, called for the convening of a multidisciplinary summit of leaders from the health professions to discuss and develop strategies for restructuring clinical education and assessing the implications of these changes for credentialing, funding and educational programs. The two councils are collaborating to convene a multidisciplinary summit of leaders from medicine, nursing and pharmacy. Representatives from IOM, the Agency for Health Care Research and Quality, the Department of Veterans Affairs, the Food and Drug Administration, the National Advisory Committee on Interdisciplinary, Community-based Linkages and the Advisory Committee on Training in Primary Care Medicine and Dentistry have expressed interest in participating with NACNEP and COGME in this endeavor. The ongoing planning is looking toward holding the summit in June 2002.

III. NACNEP'S VIEW OF THE CURRENT STATE OF NURSING

Today's registered nurse practices in a far more complex environment than in the past brought about by continuing changes in delivery of health care; rapid advances in technology, drug therapy, and equipment; increasing number of older adults with multiple chronic conditions, and expanding diversity of the country's residents. The development of myriad community-based settings as sites for delivery of health care requires a more autonomous practicing nurse with higher levels of professional knowledge and judgment and an expanded set of skills. This changing environment for nursing practice raises a multiplicity of workforce, education and conditions of practice issues.

Workforce

Slower growth rate of RN workforce. The National Sample Survey of Registered Nurses (NSSRN), a periodic study carried out by the Division of Nursing, BHPr, HRSA estimates that there were 2,696,540 RNs with current licenses to practice in March 2000, an increase of 5.4 percent over the 2,558,874 in March 1996. Although these data demonstrate continuing growth in the number of RNs the increase shown in this four-year period is less than that shown in all of the prior studies, and markedly less than the 14.2 percent increase experienced between 1992 and 1996 (http://www.bhpr.HRSA.gov/nursing).

RN workforce becoming older. The "aging of the nursing profession" and its impact on the availability of nurses is the subject of numerous recent journal articles. RNs are older today, on average, than they have ever been. The increasing age level of the RN population is well documented in the NSSRN March 2000 study. The average age of the nurses was 45.2 years compared to an average age of 44.3 years in 1996. Sixty-eight percent of the nurses in 2000 were at least 40 years old. Only 9 percent were less than 30 years old. More RNs are approaching retirement age with fewer RNs to replace them.

A very substantial percentage, 81.7 percent, or 2,201,813 out of 2,696,540 in the RN population in 2000, was actively engaged in the variety of nursing positions throughout the health care arena. Yet, the percent working in 2000 was slightly less than that found in the studies made in the 1990s. For the first time the rate of increase of the United States population has surpassed that of the RN workforce. In 2000, the ratio of RNs to 100,000 people in the United States was 782 compared to a ratio of 798 in 1996. There were only an additional 86,000 nurses in the active workforce of 2000 over that of 1996. The RNs who were not among these actively employed nurses were mainly an older group. Thirty-six percent were at least 60 years old and an additional 23 percent were between the ages of 50 years and 59 years.

Fewer entrants into the nursing profession. The slower rate of growth and the continuing aging of the nurse workforce are accompanied by significant decreases in the numbers of entrants into and graduates from nursing education programs that prepare individuals to become registered nurses. Data from the National League for Nursing's annual surveys highlight the continuous decline in the enrollments of all entry-level nursing education programs since the 1993-1994 academic year. In October 15, 1993, there were 270,228 students enrolled. By October 15, 1998, the start of the 1998-1999 academic year, enrollments had fallen to 211,514, a decrease of 22 percent.

Grave implications for nursing resources of the future. Barring significant changes in the flow of entrants into nursing, research suggests that the supply of RNs will start to decline within the next 10 years or so. In an article in the June 14, 2000 issue of the *Journal of the American Medical Association* reporting on a study analyzing the implications of the aging nurse workforce for the future, the authors project that the size of the RN workforce will begin to decline in 2012. The authors state that, by 2020, the RN workforce will be 20 percent below projected requirements.

The Congressional Research Service (CRS) in a May 18, 2001 report that reviewed various

studies of the supply and demand for nurses states that evidence exists of the supply in the RN labor market failing to meet demand around 2010. Using data from the Bureau of Labor Statistics (BLS), the report indicates an increase of 450,864 new jobs for RNs between 1998 and 2008. It also sees a need for substantial numbers of RNs to replace those who would be retiring. The report points out that, while all industries will be faced with the need to replace workers because of the aging of the population, employers of RNs will be particularly affected because of the above-average proportion of nurses aged 45 years and older compared to other workers. The NSSRN estimates that 46 percent of the actively employed RNs in March 2000 were at least 45 years old. Only about 37 percent of a comparable part of the civilian labor force in the country was at least 45 years old in the year 2000. CRS in its report states that BLS projects that 42 percent of the total 794,000 RN job openings through 2008 could be for replacing retirees.

Increased diversity of the nation. In March 2000, only 12 percent of the RNs were estimated to be from minority backgrounds compared to an estimated 30 percent of the United States population. Research has shown that there are substantial racial and ethnic disparities in health. Although a number of factors might account for these differences, inadequate access to quality and appropriate care is of paramount importance. Nurses from minority backgrounds are significant contributors to the provision of health care services, and leaders in the development of models of care that address the unique needs of racial/ethnic minority members of the country's population. Strategies directed toward attracting and retaining increasing numbers of racial/ethnic minorities into nursing are a prime consideration in the reduction of health care disparities.

A competitive edge. Nursing remains as an overwhelmingly female occupation. Despite recent gains in the number of men in the nurse workforce, 94 percent of the actively employed RNs in March 2000 were women. These data are troubling in the face of continually expanding opportunities for women in other occupations. An article in the September-October 2000 issue of *Nursing Economics$* documents the increased interest among women in careers traditionally dominated by men. It cites as examples careers such

as medicine and law that are now likely to be equally listed by men and women college freshmen. Thus, to increase, or at least maintain, interest in careers in nursing, particularly among new high school graduates, recruitment strategies to attract men as well as women are critical.

Promoting nursing as an economically attractive career is necessary for increasing its competitive standing as a career choice. Data from the periodic NSSRNs demonstrate the gains made in nursing salaries in the early 1990s. In more recent years, however, nurses' salaries show far less gain. The average salary of full-time employed RNs in 2000 was $46,782, an increase of 24 percent since 1992. But when changes in the purchasing power are taken into account, RNs made essentially no gains between 1992 and 2000. Full-time workers in the professions of medicine, pharmacy, law, and engineering, which might be competitive career choices to nursing, averaged far more than RNs in 2000. BLS estimated that the median weekly earnings for RNs were $790 compared to $1,340 for physicians, $1,243 for pharmacists, $1,304 for lawyers, and $1,104 for engineers.

Education

Increased complexity of care demands a better educated RN. The nurse workforce of today must be prepared for the increased expectations arising out of the evolving changes in the health care environment. For currently practicing RNs, advanced and continuing education are essential to ensure their contributions to the efficacy and safety of the patient care being delivered.

The nurse role of the present and future calls for RNs to practice within a complex health care system, to work as peers in interdisciplinary teams and to integrate evidence-based clinical knowledge with knowledge of the diverse community and its resources. The ever-increasing complexity of the RN's scope of practice requires a workforce that has the capacity to adapt to change. It requires critical thinking, problem solving and effective communicative skills. A broad perspective and understanding of health and factors affecting

health are needed to fill the RN roles in the present reconstituted health care system. All levels of RNs have an important role to play in the evolving health care system. Baccalaureate education with its broader, more scientific base provides the sound foundation for the variety of nursing positions and for entry to advanced nursing education and practice.

Majority of today's RN population educated at less than the baccalaureate level. According to the NSSRN, in March 2000, only 43.6 percent of the nurse workforce had at least a baccalaureate degree. These data show only a 2 percent change since 1996 when 41.5 percent of the nurse workforce had at least a baccalaureate degree. In response to the emerging health care system, NACNEP set the following target in 1995:

- Increase the overall number of baccalaureate and higher degree prepared nurses making up the basic nurse workforce to achieve 2/3 BSN-prepared nursing workforce by 2010.

To meet this target, dramatic efforts are needed for the 23 percent increase between 2000 and 2010 in the percentage of the nurse workforce with at least a baccalaureate degree.

Only 10 percent of today's nurse workforce with graduate degrees. Graduate education at the master's and doctoral levels provides the advanced knowledge necessary for specialized nursing and health care; managing and directing nursing in the varied complex clinical care settings, and educating the next generation of nursing students. It is from the nurse workforce with graduate education that those providing primary care as nurse practitioners and nurse midwives, and the nurse anesthetists are primarily drawn. These practitioners make substantial contributions to the care of the underserved and those in rural areas:

- Comparisons between certified nurse practitioners and primary care physicians show that 14 percent of nurse practitioners provide primary care in high poverty areas compared to 9 percent of physicians.
- Approximately 90 percent of certified nurse-midwives provide care to low-income women and 80 percent provide care to uninsured women.

- Certified RN anesthetists administer approximately 65 percent of over 26 million anesthetics administered each year. They are the sole providers of anesthetics in more than 70 percent of rural area hospitals.

RNs with graduate degrees also function as clinical nurse specialists to provide expert care and advice in the particular specialty area of their education. Moreover, graduate degree RNs are the nurses providing the managerial and administrative leadership that supports effective quality nursing care; the research that enhances and promotes innovation in the nursing practice and the delivery of health care, and the faculty for the nursing educational system.

Lack of availability of RNs for qualified faculty. Nursing education programs at all levels, from practical nursing education to doctoral nursing education, employed 46,655 RNs in March 2000. Preparation at least at the master's degree level is the generally accepted appropriate qualification for teaching. For baccalaureate and graduate education, the generally accepted academic norm is the doctoral degree. Data from the NSSRN indicated that not all nursing educators meet these criteria. In March 2000, 19 percent of all the nurse educators had doctoral degrees and 45 percent had as their highest level of education, a master's degree. The American Association of Colleges of Nursing (AACN) in an April 1999 *Issue Bulletin* discussing faculty shortages outlines several issues regarding the availability of faculty among which was the inadequate numbers of doctorally-prepared faculty. AACN indicates that only slightly more than 50 percent of the nursing faculty in its member universities and senior colleges are doctorally prepared. The paper also cites as issues the declines in master's degree nursing students pursuing academic careers and the aging of the nurse faculty. Nurse educators tended to come from the older segments of the RN workforce, according to the March 2000 NSSRN. The average age of all the RNs working in nursing education programs was 49.4 years. Of significance throughout is the competition between the nursing education programs and the clinical and administrative areas of health services organizations for the relatively scarce numbers of RNs with advanced degrees.

Need to broaden sites for clinical experiences. Beyond the need to ensure that sufficient

qualified faculty is available is that of the need to broaden the sites in which clinical experiences for nursing students are obtained. Clinical sites for education need to reflect the realities of community-based health services delivery prominent in our restructured health care environment. Hospital-focused clinical education does not provide the breadth and range of understanding of the practice milieu necessary for today's practitioner. It is critically important to expand the range of clinical sites for student experiences to encompass more community-based health care settings in both initial and advanced educational programs. The growth of nurse-managed centers under the aegis of nursing education programs has proved valuable in this connection. Not only do they serve as a vehicle through which the underserved can obtain health care but also they provide students with access to working with patients in the community. It is critical that sources for stable and continuous financing be provided to these clinics to ensure their viability.

Continuing education required to update RN knowledge. Rapid changes in health care needs and treatment of health problems make continuing education essential if the quality of care is to be maintained. To a large extent, today's nurses were educated in an era prior to the current revolution in health care. Fifty-seven percent of the RNs in March 2000 graduated from the educational program that prepared them to become nurses before 1985. Thus, the need to "keep up" with the technological advances of vastly expanding treatment modalities is coupled with the need for retraining and upgrading of skills to function in this current, continually changing, health care environment. The responsibility for providing the opportunities for RNs to maintain and enhance their professional knowledge and skills is a shared one. In addition to the responsibility of employers to provide inservice education that improves and maintains clinical skills there is a need for continuing education for practicing nurses in such areas as geriatrics, genetics/genomics, informatics, and other technological and specialty fields.

Practice Improvement

Changes in health care system affect distribution of nursing positions. Over the past years the hospital was the central focus of nursing education and much of the practice of nursing. The hospital setting still dominates as an employment site for RNs but marked changes are occurring:

- Less than 10 years ago in March 1992, 66.5 percent of the 1.8 million employed RNs worked in hospitals. Only 59 percent of the 2.2 million employed RNs in March 2000 worked there.
- The movement of care from the inpatient arena to an ambulatory base provides for a shifting locus for RN employment within the hospital. In 1992, 64 percent of the RNs providing direct patient care in hospitals worked in in-patient bed units. In 2000, the percentage decreased to 58 percent, as estimated from known responses to the NSSRN.
- Between 1992 and 2000, the number of RNs employed in public and community health settings including such settings as State and local health agencies, home health agencies, community-based clinics, student health and occupational health services increased 61 percent. The number employed in ambulatory care settings, including physician, nurse, and group practices and health maintenance organizations increased 45 percent.
- Although far less than the gains shown for the public/community health and the ambulatory care sectors, the number of RNs employed in nursing homes also increased at a higher rate than the number in hospitals, 18.5 percent compared to 5 percent.

Current difficulties with filling RN positions. Increasingly, media from all parts of the country carry stories about difficulties in recruiting RNs for vacant nursing positions. In addition to reports of individual institutions and agencies' inability to recruit RNs to fill staff vacancies, data from a number of national and State studies reveal significant shortages.

Most of the reported data focus on the difficulties hospitals have in recruiting sufficient numbers of nurses to fill their positions. A study carried out by the American Hospital Association in 2001 of 715 hospitals across the country revealed that 126,000 of the 168,000 positions in six job categories that were unfilled were for RNs. Seventy-five percent of the hospitals reported more difficulty in recruiting for RNs in 2001 than the previous year. These data are reinforced by studies made in various States. According to an article in the *South Florida Sun-Sentinel*, the Florida Hospital Association reported that a vacancy rate for RNs of 11 percent in 2000 increased to 15.6 percent in 2001. The Association for Hospitals and Health Systems in Maryland reported that the percentage of unfilled RN positions increased from 11 percent in 1999 to 13.9 percent in 2000. A study made in Oregon showed that vacancies for nurses in hospitals ranged between 10 percent and 18 percent and that high vacancy rates were also being reported for other RN employment settings.

RN dissatisfactions with employment conditions. Along with the media reports of vacant hospital nursing positions are the reports of nurse dissatisfactions with staffing levels that are insufficient for providing appropriate care to patients and mandatory overtime requirements that exacerbate the unsafe practice conditions. The General Accounting Office (GAO) in its May 17, 2001 report on recruitment and retention of nurses and nurses aides indicates that job dissatisfaction may affect the extent of the nursing shortage. GAO states that recent surveys "have found decreased job satisfaction, and a high portion of respondents have reported increased pressure to accomplish work, increased required overtime, and stress-related illness." Based on estimates in the NSSRN for March 2000, 73 percent of the RNs in the active workforce were satisfied with their jobs. But, a lower percentage of those who were staff nurses in hospitals, 68 percent, were satisfied. The tension caused by responsibilities for sicker patients with complex conditions, and the work schedules required by the need to cover the 24-hour, seven day a week care for patients, possibly contribute to less satisfaction among hospital-employed RNs. Also, these same conditions could account for hospital-employed RNs retreating to less stressful and demanding nursing positions as variability in the types of employment sites expands.

An aging nurse workforce has implications for the work structure. The increasing age level of RNs points to the need to restructure nursing positions to accommodate to the physical needs of older individuals and the possible expectations that older workers might have for independence and more professional level interactions. The age level of the available RN workforce, in particular, affects hospitals. They are more likely than other types of nurse employment settings to draw their RN employees from the younger age cohorts, those that are predicted to be a decreasing part of the RN workforce. Data from the NSSRN for March 2000 show that the average age of the RNs working in hospitals was 41.8 years, far lower than that for RNs in ambulatory care settings, 44.3 years; public/community health settings, 45.2 years; and nursing homes, 45.3 years. Furthermore, RNs in the most stressful and labor-intensive units in the hospital tended to be younger than those in other types of units. For example, the average age of the nurses working in intensive care units was 38.7 years; those in step-down or transitional bed units averaged 38.8 years, and those in other types of bed units averaged 41.1 years. Nurses working in emergency departments had an average age of 40.4 years and those in outpatient departments, 44.5 years. Under current circumstances, it is anticipated that the aging of the nurse workforce will continue in the future, thus materially affecting the ability to recruit and retain nurses in these stressful positions. Thought has to be given to approaches to accommodate to this phenomenon in order to attract nurses to these positions and, once there, to retain them.

The ability of the present nursing workforce and the nursing education system to meet the health care challenges of today and the future is questionable. Currently, the quantity of nurses is lacking and projected to fall even further behind the societal needs engendered by the demographic aging curve of the population. NACNEP believes that the many issues outlined here about the size and the composition of the workforce; the nurse educational system and the work environment identify matters for consideration in affecting the current and future critical nursing shortages. These must be addressed to ensure the availability of the size and quality of the RN workforce necessary for the country's health care service requirements.

IV. THE EFFECT OF TITLE VIII ACTIVITIES

The NACNEP is in a unique, national position to monitor and assess the outcomes associated with Title VIII programming. This section includes the implications for policy based on outcomes of Title VIII funded projects over the past three years. Title VIII-funded projects can be found at http://www.bhpr.HRSA.gov/nursing.

Available funding. The legislation enacted in November 1998 was first implemented in 1999 for the Fiscal Year 2000 grant cycle. The 1998 legislation provides for three programmatic clusters: Part B, Section 811, Advanced Education Nursing; Part C, Section 821, Increasing Nursing Workforce Diversity; and Part D, Section 831, Basic Nursing Education and Practice. At this time, funds under this legislation are distributed according to specific appropriations for each of these parts. In these first two years of implementation, institutions in every State in the United States have received grant funds from Title VIII programs to enhance nursing education and practice. Between Fiscal Year 2000 and Fiscal Year 2001 the total appropriations increased 16.7 percent as shown in the following table.

APPROPRIATIONS FOR TITLE VIII PROGRAMS
FISCAL YEARS 2000 AND 2001
(Dollars in thousands)

Nursing Education Programs	FY 2000	FY 2001	Total
Advanced education nursing	$50,587	$59,048	$109,635
Nursing workforce diversity	4,009	4,673	8,682
Basic nurse education and practice	10,966	12,791	23,757
Total	$65,562	$76,512	$142,074

For Fiscal Year 2000 and Fiscal Year 2001, between 50 and 60 percent of over 500 applications submitted and reviewed for all purposes except the traineeship grants were

approved. Experience shows that, while the majority of the applications received are meritorious and approved, less than half of those get funded in any one fiscal year because of the limited funds available. Given the time and effort that goes into developing an application for submission, increased funding could also serve to attract additional worthwhile projects.

Applications for traineeship grants from appropriate institutions are funded through a formula based on the number of institutions applying, the number of students and graduates in the institutions and the funds available. Traineeship grants are for graduate nursing students in advanced educational programs and for nurse anesthetist students. The institutions receiving funding are responsible for awarding the grants to eligible students. In the legislation, the provision for advanced educational program graduate student traineeship grants is separate from the provision for nurse anesthetist student traineeship grants.

In Fiscal Year 2000, $15.8 million was distributed to 301 graduate nursing education programs that awarded the funds to a total of 6,231 students. In Fiscal Year 2001, $18.6 million was distributed to 316 programs that provided support to 6,265 students. Although about a quarter of the enrollees in the applying institutions in each of these years received some support, because of limited total funds available, each supported student received only about $2,500-$3,000/year, on average.

In each year, the traineeship funding for nurse anesthetist students totaled $1 million. In Fiscal Year 2000, 68 educational programs received grants and 1,038 students were supported. In Fiscal Year 2001, 66 programs were awarded funding and 1,107 students were supported.

Overview of Title VIII accomplishments. Federal support for nursing education and practice under Title VIII spans almost forty years. Funding through this mechanism has resulted in major contributions to the health care available to the country's population through the development of new and innovative approaches in the use of nursing resources,

new models of education and practice that maximize the effectiveness of nursing resources, timely responses to emerging health care needs that provide nursing with the knowledge necessary to effectively provide care, and limited but important improvement in the recruitment and retention of a diverse nursing student body.

Involvement in the development of the role of the nurse practitioner in the 1960's and its continued support through Title VIII for nurse practitioner and nurse-midwifery programs, has helped to meet the demand for primary health care services in the United States, particularly among underserved and vulnerable populations. As the health care delivery system moved from traditional hospital–based care to community and home settings, the demand for multi-skilled advanced practice nurses with expertise in primary and specialty care emerged. Preparation of the combined nurse practitioner/clinical nurse specialist role from the mid 1990's to the present time, provides care of citizens needing both primary and specialty care for their complex illnesses, regardless of setting.

Support of innovative nursing demonstrations in the 1980's led to the current grant program support for creating nurse-managed centers across the United States where underserved children, families and the elderly may receive primary health care. The positive effects of these programs have been documented over time. To maximize the limited funds provided for their creation through Title VIII, the availability of reliable, sustainable funds is critical to each program's continuance.

The HIV/AIDS epidemic in the early 1980's and the current health care system needs for nurses prepared in genetics, informatics and bio-terrorism serve as examples of issues needing immediate attention to ensure that nursing can respond. Often, without support, academic systems are unable to re-direct scarce resources within the same academic year that the resources are needed to develop and implement new programs with potentially limited numbers of students. Emerging health care needs are met by the annual grant cycle which permits distribution of funds to programs to prepare a cadre of advanced practice nurses to respond to evolving diseases/health care needs quickly.

The development of a nurse workforce that reflects the racial/ethnic diversity of the nation's population is a long-standing issue that Title VIII has addressed by providing funding for programs to alleviate the financial and other barriers that impede the access of racial and ethnic minorities to nursing careers. Funds have been used to develop innovative approaches to recruitment of minority and other individuals from disadvantaged backgrounds into nursing educational programs and for retention of these students through graduation. Although these approaches have been implemented on a small scale because of limited funding, they have contributed to the modest increase in the minority nurse workforce that has been observed in recent years. Dramatic increases in funding would assist in accomplishing the goals of a nurse population that mirrors the diversity of the nation's population.

Requirements across all the programs administered under Title VIII include adherence to national guidelines and competencies extant in the field. This standard ensures quality programming in primary and specialty care nursing programs and in health care delivery. Funded programs to prepare registered nurses must be nationally accredited in the field and graduates must be eligible to take State licensing examinations following preparation. At the advanced practice level, graduates must be eligible to take State and national certifying examinations following graduation. These strong eligibility requirements assure that the funding is used for support that prepares a cadre of nurses who are capable of providing quality health care.

Furthermore, the goal to improve the diversity of the RN workforce is addressed to some extent in the administration of all the programs under Title VIII. The advanced education and traineeship programs have all contributed to the goal by giving funding priorities to educational programs that demonstrate either substantial short term progress or a long-standing track record of enrolling and graduating trainees from those minority or low income populations identified as at risk of poor health outcomes.

Recent Title VIII accomplishments. The following brief review of some recent outcomes of each of the programs serves to illustrate the resulting benefits to the provision of health care to the population.

Advanced Education Nursing (Section 811)

Federal funding for graduate nursing education has been significant in the development and expansion of advanced practice nursing roles in primary and specialty care to individual patients, families and communities. This section of the legislation supports graduate nursing student traineeships and projects in advanced nursing education programming (primary and specialty care). It is this program that provides for the preparation of nurse practitioners (NPs), nurse midwives (NMWs), clinical nurse specialists, and nurse anesthetists as well as those providing leadership in nursing management and teaching positions. Some recent accomplishments are:

- 54 percent of the nearly 900 nurse practitioner and nurse-midwife graduates a year in supported programs work in Health Professions Shortage Areas. These areas are mostly rural and have 29 million underserved residents.
- In Fiscal Year 2000, in the 121 projects supported, over 3,000 students were enrolled and 1,280 graduated with advanced degrees in nurse anesthesia, psychiatric-mental health nursing, community/public health nursing, geriatric and other clinical nursing specialties, nursing education and administration. Of these, 53 percent were enrolled in NP/NMW programs; 42 percent in other advanced practice clinical, education or administration programs, and 5 percent in nurse anesthetist programs.

Innovative approaches to educate graduate nurses to current issues are illustrated by these recent grants:

- One school of nursing responded to the public health issue of an escalation in the HIV/AIDS patient population in Chicago with an expansion of its existing master of science in nursing program by adding a new specialty in HIV nursing. A primary emphasis of this program is the development of courses that facilitate the student's knowledge acquisition and clinical experience that addresses the ambulatory and home health care needs of patients with cancer and HIV/AIDS. In addition, students

have the opportunity to acquire the skills for the case management of these patient populations to foster cost-effective quality care in a managed environment.

- Support from a grant to a California entity was used to prepare nurse practitioner students to address the special risk factors and co-morbidities associated with psychiatric illness and to provide training at specialized sites where the severely mentally ill receive services. As part of the grant, students were taught the symptom management, psychoeducational and interpersonal skill necessary to work with persons experiencing a range of psychiatric symptoms and to engage those individuals in their own care. Of the 19 students currently enrolled in this program, 26 percent are from minority or disadvantaged backgrounds.

Workforce Diversity (Section 821)

This program is the principal mechanism in the legislation for improving the racial and ethnic diversity of the basic nurse workforce. Grants and contracts are awarded to increase nursing education opportunities for individuals who are from disadvantaged backgrounds (including racial and ethnic minorities underrepresented among RNs). Some recent accomplishments are:

- Supported schools with programs for students from disadvantaged backgrounds have enrollments in which 38 percent of the students are from minority groups, compared to a national average of 19 percent. Out of 1,620 disadvantaged participants in the 18 current projects, 1,203 are from racial/ethnic minority backgrounds.

- The student/participant breakout for the supported projects show that 65 percent (1,050) were nursing students, 27 percent (439) were college pre-nursing students, and 8 percent (131) were high school participants involved in recruitment and pre-entry activities.

Innovative use of these funds is illustrated by these selected examples from recent projects:

- Funding support was provided to a university in southern California to identify, recruit and select persons from disadvantaged backgrounds; facilitate their entry into clinical courses; and provide services to help them successfully complete the baccalaureate nursing program. Approximately 100 disadvantaged individuals (including underrepresented minorities) will be identified, recruited, and selected from colleges, high schools, ethnic minority churches and health care facilities. Accepted students will be assured acceptance into the university baccalaureate nursing program after completing and passing the required prerequisites.

- In North Carolina, funding support was provided to increase enrollment and enhance program success for Associate Degree nurses from disadvantaged backgrounds seeking the baccalaureate degree in nursing. Project activities include: (1) a career awareness recruitment program; (2) partnering with area community college leaders to implement an articulation program for associate degree nursing graduates; (3) peer mentoring; (4) a stipend program, and (5) a visiting nurse lecture series featuring nurses from disadvantaged backgrounds who are well known for their contributions in research, clinical nursing, and/or nursing education. It is anticipated that this project will impact the shortage of baccalaureate prepared nurses from disadvantaged backgrounds in southeastern North Carolina and will result in improved nursing care services to underserved and high risk populations of the area.

Basic Nurse Education and Practice (Section 831)

This section was established to provide grants and contracts to enhance the educational mix and utilization of the basic nursing workforce by strengthening programs that provide basic nurse education through eight targeted purposes. Some selected examples of projects undertaken under various targeted purposes serve to illustrate accomplishments under this section:

- Six projects designed to facilitate and expedite baccalaureate education for RNs in rural areas using distance learning methodologies were supported to demonstrate that quality curricula developed for delivery by distance learning methodologies (primarily computer-based) will facilitate RN to BSN education for nurses living in rural areas and working with underserved populations.

- In Fiscal Year 2001, funds were targeted for ten small seed grants ($25,000 each) to support partnerships between schools of nursing and geriatric long-term care facilities designed to strengthen the geriatric nursing didactic content and clinical components of the baccalaureate nursing program.

- Support to the Minnesota State Department of Health provides continuing education for public health nurses on population-based care in rural, often remote, medically underserved areas in five States. The project also supports an option for academic credit leading to a baccalaureate or master's degree.

- Establishing or expanding nursing practice arrangements in noninstitutional settings to demonstrate methods to improve access to primary health care in medically underserved areas targeted for this purpose provides the following recent examples of accomplishments:
    - In Fiscal Year 2000, nurse managed centers/clinics provided primary care encounters to 100,000 underserved persons representing high risk populations.
    - Primary care services were expanded to an underserved, low-income culturally diverse urban population in a designated Philadelphia Public Housing Authority complex.
    - Expansion of nurse managed centers under a networked service concept was accomplished in the Miami-Dade metropolitan area. Eight nurse-managed centers were linked together throughout the area by using an elementary school health center as a "hub."

- Nurse managed primary care services for older adults were provided in Delaware.
- Primary health care access was provided to a multi-cultural, medically underserved population of adolescents in an urban high school in Massachusetts.
- A nurse-managed Children's Wellness Center for school-age elementary children, their younger siblings, and the children of adolescent families was expanded in Texas.
- Primary care services were provided to the homeless and near homeless through a downtown nursing clinic in Tennessee.

It is evident that the funding for nursing education and practice made a difference in both the access to and the quality of care delivered to vulnerable populations, in rural and urban settings. Current levels of funding are woefully inadequate to accomplish all the clearly indicated objectives of the Title VIII legislation. It is important that assessments be made of all funding levels necessary to support the development of an appropriate nurse workforce that assures a nursing care presence at the bedside and in the community and that the funds be available for use for those purposes for which there is a critical need at the time. A prime and continuing critical need is that for frequent and ongoing data to monitor, assess, and correct emerging difficulties in the preparation of nurses and the delivery of nursing care.

V. CONCLUSIONS AND RECOMMENDATIONS

NACNEP since the enactment of the 1998 legislation has initiated its examination of the Title VIII administration and regulations with respect to the nurse workforce, education and practice improvement during a time of continual, evolving, change in the health care environment. Nursing must be responsive to these changes to fulfill its responsibility to provide adequate and qualified health care to the nation's population. NACNEP, therefore, specifically targeted aspects that affect Federal policy matters and those for which the Federal government can be particularly instrumental in affecting change. At the same time, NACNEP recognizes that change can come about only through the concerted activities of all public and private partners involved; those in the profession, the health care industry and consumers, and all levels of government. However, NACNEP sees a distinct role of leadership for the Federal government through Title VIII and other Federal government vehicles that fund nursing education and nursing services.

Three distinct projects NACNEP initially undertook during this period examined specific issues affecting the development of the workforce and its education and practice improvement.

1. NACNEP looked at the funds available to nursing education through Medicare. It recommended that these be redirected toward providing support at the baccalaureate and higher degree level nursing education, as this would best serve the needs for qualified registered nurses to provide the services of today's health care delivery system.

2. NACNEP, in recognition of the increasing diversity of the population and the impact of this change on nursing resources and services, examined the barriers to and the requirements for increasing the diversity of the nurse workforce. It recognized that the magnitude of the changes required needed a concerted national effort involving the public and private sectors and, to that end, developed a national agenda. The recommendations within that agenda focused on the following four goals:

- Enhance efforts to increase the recruitment, retention, and graduation of minority students.
- Promote minority nurse leadership development.
- Develop practice environments that promote diversity.
- Promote the preparation of all nurses to provide culturally competent care.

3. NACNEP, working in partnership with COGME, considered that the enhancement of patient safety in today's health care delivery system requires increased interdisciplinary activity. Agreement was reached at the joint meeting of the two councils on recommendations designed to foster interdisciplinary education and practice that were in line with these five major findings:

   Finding One: Patient safety cannot be accomplished without interdisciplinary practice approaches.

   Finding Two: Patient safety gains are unlikely to be achieved at a satisfactory pace in the absence of revolutionary change.

   Finding Three: Current system discontinuities need to be confronted towards the aim of building a true, safety-oriented system of care.

   Finding Four: A significant cultural change in medicine and nursing is required to achieve the needed gains in patient safety.

   Finding Five: Patient safety requires that patients become acculturated in the need to participate actively in their own health care.

At present, the nation is experiencing a severe nursing shortage. Without immediate action, it is anticipated that there may be 20 percent fewer RNs than are required to meet the nation's health care needs by 2020. Factors contributing to this complex nurse workforce shortage include an aging nurse workforce, declining enrollments in nursing education programs, a shortage of nurse educators, and work environments that challenge the nurse's ability to provide safe, quality nursing care to patients. NACNEP considered the severity of the current and impending future nursing shortage and its implications for the nation's ability to

provide its residents with health care from an adequate and qualified nurse workforce. NACNEP recommended in its first review of the current nursing workforce shortage the following thirteen actions:

1. Expand funding and Federal programming for nursing education to increase the capacity of programs to adequately prepare sufficient numbers of registered nurses to meet the health care needs of the nation.
2. Increase the capacity of nursing programs to ensure a diverse workforce that reflects the racial/ethnic composition of the overall society and provides culturally competent care to racial/ethnic minority populations, consistent with the *National Agenda for Nursing Workforce Racial/Ethnic Diversity.*
3. Target Federal funds to increase the overall number of baccalaureate and higher degree prepared nurses making up the basic nurse workforce to achieve 2/3 BSN prepared nursing workforce by 2010.
4. Provide Federal funds to support workplace improvement activities to eliminate barriers (such as increased workloads, mandatory overtime, low salaries, limited career advancement and low RN staff to patient ratios) to the delivery of quality care in safe, traditional and nontraditional environments.
5. Provide Federal funds to demonstrate appropriate use of the latest technologies, including informatics and biotechnology, by nursing faculty, students and clinicians to assure both the provision and the management of safe and quality care to patients.
6. Increase program capacity to expand clinical practice settings to prepare basic and advanced practice nurses to serve as nursing faculty, clinicians and students in primary and specialty care settings.
7. Establish innovative teaching and leadership institutes in every State to assist nurses in clinical practice to develop essential skills to assume faculty roles.
8. Establish innovative, interdisciplinary educational and practice programs that are evidence-based and demonstrate the relationship between the delivery of quality nursing care and the improved safety of patients.
9. Support enrichment activities for K-12 students to increase recruitment into nursing.
10. Support recruitment strategies for second degree students, men, and college students

with undeclared majors, into professional nursing.

11. Improve Federal Medicare reimbursement of advanced practice nurses, including nurse anesthetists, nurse-midwives, nurse practitioners and clinical nurse specialists, and nursing faculty, in practice in medically underserved areas.
12. Provide reimbursement for nurse managed centers consistent with that of Federally Qualified Health Centers for the same and/or similar health care services delivered.
13. Reform Graduate Medical Education (GME) funding formulas to include direct and indirect Graduate Nursing Education (GNE) dollars for baccalaureate and higher degree programs to ensure geographic distribution of funds to all fifty States.

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Bureau of Labor Statistics, http://www.bls.gov

Health Care Financing Administration (now Centers for Medicare and Medicaid Services) http://www.hcfa.gov/

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