



CALIFORNIA STRATEGIC PLANNING COMMITTEE FOR NURSING
COLLEAGUES IN CARING:
Regional Collaboratives for Nursing Work Force Development



The California Nursing Work Force Initiative



Planning for California's Nursing Work Force

Phase III Final Report

September, 2002



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PLANNING FOR CALIFORNIA'S NURSING WORK FORCE

PHASE III FINAL REPORT

Executive Summary

California is in the midst of a nursing shortage that impacts access to care, threatens public health as well as patient safety and has the potential to negatively affect quality of care. This is a health care crisis. Population increases, an increased proportion of elderly in the population, an aging nursing work force, and insufficient capacity in nursing schools contribute to increasing demand and decreasing supply of registered nurses (RNs).

The California Employment Development Department (EDD) projects a demand for 109,600 additional RNs by 2010 for all segments of care. This is almost 40% more RNs than were working in 2000. EDD also projects a demand for an additional 25,400 licensed vocational nurses (LVNs) by 2010, an increase of nearly 50% in the number of LVNs. Hospital employers responding to the California Strategic Planning Committee for Nursing (CSPCN) Employer Intention Survey indicated a vacancy rate for RN full-time equivalent (FTE) positions in hospitals of 11.8% in 2000-2001. In 2002, a 15% vacancy rate in hospitals was reported by the California Healthcare Association. Beyond hospitals, the California nursing shortage is listed as a major health care delivery issue statewide by organizations and agencies such as those concerned with long-term care, public health, and home health. An analysis of RN supply and demand based on the 2000 National Sample Survey of Registered Nurses was conducted recently by the federal Bureau of Health Professions. Analysts identified that deficits in RN supply previously projected for 2007 were already present in 2000 at a rate of 6% for the nation and 8% for California.

In California, RN pre-licensure nursing programs are almost universally oversubscribed and many, particularly in public institutions, still have long waiting lists. Yet, the capacity of nursing education programs did not increase for over a decade. Only within the last two years has capacity increased in some programs. The 1999 CSPCN Phase II report recommended that nursing program capacity be increased and that the increase be underwritten with state funds. The legislature has failed to support nursing education. Industry and education partnerships have been formed or strengthened for the short term to increase enrollments through local and regional initiatives. Some of the partnerships are aimed at creating new RN pre-licensure enrollment opportunities. Others provide on-site baccalaureate completion programs for RNs who graduated from associate degree in nursing (ADN) programs. These efforts underscore the need of employers for RNs with at least a baccalaureate education.

Legislative support is needed in California to increase program capacity by expanding current programs and creating new ones. Scholarships are needed to support students who attend programs in public or private institutions. Increased support of direct entry baccalaureate and masters level RN pre-licensure programs is extremely important given the increased demand for nurses prepared at those levels.

Baccalaureate and masters degree graduates have the requisite skills desired by employers and form the pipeline to graduate education required for nurse educators, nurse administrators and advanced practice RNs. Currently, only 27% of RN pre-licensure enrollment opportunities are in these programs and nearly half are in private schools; the remaining 73% are in ADN programs. Education and service partnerships are critical and valuable but do not replace substantive State funding to support educational programs for the long term. In 2000-2001 there were approximately 40% more applicants for nursing education programs than could be enrolled because there was no space for them. Interest in a nursing career is increasing. Program capacity is clearly insufficient to meet projected demand and is dependent on adequate funding for faculty.

In 1999, CSPCN called for further work on program articulation so that transitions are streamlined and predictable between LVN, ADN and baccalaureate (BSN) educational programs. While some of the work on articulation was accomplished over a decade ago, much has been accomplished recently through the California State University Nursing Alignment Taskforce and the Intersegmental Major Preparation Articulated Curriculum (IMPAC) Project. Work is continuing toward a common set of prerequisites and required courses to facilitate transfer between programs. Regionally, educational partnership models among programs have been undertaken. These unique and creative nursing education programs move students directly into the BSN path by capitalizing on the strengths of the ADN and BSN programs.

CSPCN also supported recruitment and retention of a diverse student population by ethnicity and gender. During the past three years, the proportion of both ethnic minority students and male gender students has increased. In fact, the proportion of students from minority backgrounds now accounts for over half the students enrolled and graduating from California nursing programs.

The Nursing Workforce Advisory Committee was appointed by the Board of Registered Nursing (BRN) in November 2001. This 16-member advisory committee is composed of consumers, health workforce planners, nursing service, nursing education, professional associations, unions, and government agencies. The purpose of the Nursing Workforce Advisory Committee is to advise the members of the BRN and Board staff on current and projected issues affecting the nursing workforce. Special focus is on data about the supply and demand of nurses, issues affecting the ability of nurses to provide safe, accessible patient care, and strategies to recruit and retain student nurses, nursing faculty, and direct care nurses. Appointment of the Advisory Committee fulfills a CSPCN goal to for data collection and policy support over the long term.

The following recommendations are based on the current nurse supply and demand factors in California. CSPCN recommends that state funds be allocated to:

1. Directly support a state-determined RN pre-licensure class size and provide funds directly to programs rather than leaving decisions to fund nursing education to individual campuses.

2. Fund increased RN pre-licensure nursing education capacity by expanding current programs and creating new ones in the University of California, California State University and California Community College systems.
3. Change the mix of RN pre-licensure student placements to meet employer demand so that 40% of student enrollments are in baccalaureate and masters-level entry programs and 60% are in ADN programs (the current proportions are 30% and 70%).
4. Provide scholarship support for RN pre-licensure nursing students enrolled in private as well as public nursing programs.
5. Support local and regional partnerships for nursing education through grants and scholarships.
6. Fully fund the Board of Registered Nursing to provide data on a continuing basis to direct policy decisions related to an adequate supply of licensed nursing personnel.

The nursing shortage has reached crisis proportions in California. Based on the projected requirements for licensed nursing personnel, a concerted effort by all must be directed at providing an adequate supply of appropriately prepared nurses to meet the needs of California's people.

PLANNING FOR CALIFORNIA'S NURSING WORK FORCE

PHASE III FINAL REPORT

Background

The shortage of registered nurses (RNs) is deepening in California and nationally.^{1,2} Factors contributing to the shortage include: population increases and an aging population requiring increased nursing services; an aging nursing work force; reports of job dissatisfaction; and insufficient enrollments in nursing schools nationally.³⁻⁶ In California, however, almost all nursing programs are fully subscribed. Many programs have waiting lists but total nursing program enrollment opportunities have remained static during the past decade increasing the state's reliance on recruitment of nurses educated elsewhere.⁷ Compounding the problem is the aging of the nursing faculty and a shortage of faculty to educate large numbers of new nurses.⁸⁻¹¹ Faced with projections of increasing demand and decreasing supply,¹ the nursing shortage is a pressing issue for healthcare providers, professional organizations and associations, regulatory and health planning agencies, legislators and the public.¹²

The California Strategic Planning Committee for Nursing (CSPCN) was founded to develop reliable data for public policy and resource allocation decisions to meet California's need for nurses.¹³ This is the third assessment of nurse demand and supply in California completed by CSPCN. Prior data synthesis reports were published in 1996¹⁴ and 1999.¹⁵ CSPCN is funded by healthcare providers and provider organizations, state health and regulatory agencies, nursing organizations, and individuals. CSPCN is one of twenty regional collaboratives nationwide funded, in part, from 1996 through 2002 by The Robert Wood Johnson Foundation initiative, *Colleagues in Caring, Regional Collaboratives for Nursing Work Force Development (CIC)*.¹⁶

The California Strategic Planning Model

California's Strategic Planning Model (Appendix A) identifies data and contextual elements related to nursing supply and demand that are considered in an analysis of the adequacy of nurse supply for California. The Model components are comprised of existing national and statewide data sources as well as project-specific data elements. Taken together, they provide insight into the implications of current and projected nurse supply and nurse demand indicators. Strategic recommendations are derived from a synthesis of the elements.

Nurse Demand

Federal and State Nursing Work Force Projections

Nationally, the Bureau of Labor Statistics (BLS) projects a 15.2% increase in all jobs for the period, 2000-2010. Jobs for RNs, however, are expected to increase at a rate of 25.6% with a projected

need for 1,004,000 additional RNs nationwide by 2010. The rate of increase for Licensed Practical and Vocational Nurses (LPNs and LVNs) is projected to be 20.3%.¹⁷

California's rates of job growth overall and for LVNs exceed national rates. Job growth rates for RNs are similar to national projections. The California Employment Development Department (EDD) projects a 22.2% absolute growth in all jobs in California for the period, 2000-2010.¹⁸ Projections are based on the Occupational Employment Statistics (OES) Survey of Employers which is conducted annually. The projections are estimates of changes in occupational employment resulting principally from growth and technology and include application of a change factor developed by the BLS.¹⁹ EDD lists RNs among the occupations expected to have the greatest projected growth in actual number of job openings between 2000 and 2010. Nursing work force projections for RNs and LVNs for the period 2000 through 2010 are presented in Table 1 along with population projections for the same period.^{18, 20}

Table 1. California Population Projections and Occupational Projections for Full-Time Equivalent (FTE) Registered Nurses (RNs) and Licensed Vocational Nurses (LVNs) for the Period, 2000 to 2010.

California	Year		Numerical Change	Percent Change	Separations	Openings (Change + Separations)
	2000	2010				
Population	34,480,300	40,262,400	5,782,100	16.8	NA	NA
Registered Nurses	226,800	284,800	58,000	25.6	51,600	109,600
Licensed Vocational Nurses	40,200	53,600	13,400	33.3	12,000	25,400

Sources: State of California, Department of Finance, *Interim County Population Projections*, Sacramento, CA, 2001; Employment Development Department, Labor Market Information Division, *Occupational Employment Projections, 2000-2010*, Sacramento, CA, 2002.

The numerical change in RN jobs combined with openings due to separations results in a projected demand of 109,600 additional RNs needed between 2000 and 2010. This number represents 38.5% of the projected RN work force demanded by 2010. Numerical change combined with openings due to separations for LVNs results in a projected demand for an additional 25,400 LVNs over the ten-year period, or 47.4% percent of the projected LVN work force in 2010.

Health Care Scenarios Affecting Demand for Nurses

The context within which health care delivery occurs has changed. Cost-cutting measures that reduced resources to support nursing care in the 1990's are less visible. There is an increasing emphasis on patient safety and health care quality increasing the demand for nurses across the healthcare continuum. Legislative action to assure minimum staffing ratios and to eliminate mandatory overtime address specific issues related to health care quality and increase the demand for nurses. The shortage of RNs has reached crisis proportions increasing the demand of new RNs and placing renewed emphasis on retention strategies for those currently employed. A steadily increasing proportion of elderly in the population create a demand for nursing personnel prepared to provide geriatric care.

Changes in Population Demographics. Population growth of 17.7 million people is projected for California between 1995 and 2025. This growth rate is the highest in the nation by percent increase and net change for the period. In most states, the rate of population change is expected to decline after the year 2000 but in California there is a projected increase in the population growth rate of 52 percent between 2000 and 2025. Approximately half of the projected population growth, almost 9 million people, is projected to come from international migration.²¹

A significant proportion of the population will be over the age of 65 years which increases the demand for health care services. In 1975, 10.5% of the population was over 65 years of age. The proportion increased to 12.6% in 2000 and is projected to reach 14.7% by 2015. The proportion of Americans over the age of 80 years increased from 2.1% of the population in 1975 to 3.3% in 2000. Projections for the year 2015 indicate that 3.8% of the population will be over the age of 80 at that time.²² Of the 35 million people 65 or older in 2002, 23% reported fair or poor health. Almost half of the hospital days (48%) and 23% of ambulatory care visits are attributed to the elderly. Additionally, 83% of skilled nursing facility residents are elderly. As a result, there is a growing demand for RNs and LVNs as well as physicians and other health care personnel with knowledge of and expertise in geriatrics.²³

Emphasis on Health Care Quality and Patient Safety. In the report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, the Institute of Medicine (IOM) calls for a national statement of purpose to improve a healthcare delivery system that is considered poorly organized, overly complex, and uncoordinated thereby jeopardizing patient safety. Patient care that is safe, effective, patient-centered, timely, efficient and equitable are primary aims. Coordination of care for Americans with chronic conditions is a major theme. Four healthcare delivery environmental changes are proposed: 1) application of evidence-based knowledge to practice; 2) use of information technology with primary emphasis on automation of patient-specific information; 3) alignment of payment policies to reward quality improvement; and 4) preparation of a health care workforce for a redesigned health care system.²⁴

The report builds on an earlier IOM report from the same Committee, *To Err is Human: Building a Safer Health System*. The report identifies the health care system as fragmented and decentralized resulting in medical errors which can best be prevented by designing a safer health care system. Recommendations include an enhanced knowledge base about safety, mechanisms to identify and learn from errors, enhanced performance standards, and implementation of safety systems at all levels of health care delivery.²⁵

Legislative Actions Related to Health Care Quality and Patient Safety. Two nurse staffing issues related to health care quality and patient safety are being addressed within federal and state legislative arenas. They are nurse-to-patient ratios and mandatory overtime.

Nurse-to-Patient Ratios. In 1999, the California legislature passed Assembly Bill 394 which directs the California Department of Health Services (DHS) to establish nurse-to-patient ratios for RNs

and LVNs in acute care hospitals. California is the first state to legislatively address nurse-to-patient ratios. Assumptions about the levels of nurse staffing and quality of care underlie decisions to mandate ratios. The assumptions are supported, to some extent, by data which correlate nurse staffing levels with several positive patient outcomes²⁶⁻³⁰ Other reports, fail to show a relationship or recommend caution in taking action based on limited data.^{31,32}

There are concerns about the ability of California hospitals, which have a greater than 15% vacancy rate, to achieve ratio requirements without reducing access to patient care services if the increased demand for nurses cannot be met. California Healthcare Association calculations show that an additional 5,000 RNs will be required to meet mandated ratios. Further, almost two-thirds of hospitals are losing money on operations.³³ An analysis of the costs of implementing nurse-patient staffing ratios indicated that between 50% and 95% of California hospitals will be fiscally impacted depending on the ratio scenario eventually adopted.³⁴

Mandatory Overtime. The practice of requiring mandatory overtime as a RN staffing strategy has raised issues of patient safety as well as nurse welfare. A national survey conducted for the Service Employees Union International by the Feldman Group found that nurses work an average of 6.5 hours of overtime a week and 8.5 weeks of overtime per year. In California, nurses on average work an additional 11 weeks of overtime per year.³⁵ Nationally, the Safe Nursing and Patient Care Act was introduced at the federal level in November, 2001 (HR 3238/S 1686) to limit mandatory overtime to declared emergencies. California adopted regulations which limit mandatory overtime effective in October, 2000. The regulations apply only to nurses and other health care workers who work 12-hour shifts and stipulate that no mandatory overtime can be required except under specific emergency situations. Legislation or regulations has been enacted in seven states and introduced in another 15 states, including California, to eliminate or further regulate mandatory overtime.

Impact of the Nursing Shortage on Health Care Quality, Patient Safety and Access to Care. *Healthcare at the Crossroads*, a recent report from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), states that the growing shortage of nurses in America's hospitals threatens quality of care and patient safety as well as reducing the capacity of hospitals to treat patients.³⁶ Other reports cite similar concerns related to the health of the public as a result of nursing shortages.³⁷

Nationally, hospital executives report difficulties in filling nursing positions.² Results of a national survey of RNs (N=4,100) conducted by NurseWeek and the Association of Nurse Executives (AONE) show that 95% of respondents believe there is a nursing shortage. Among the respondents, 76% believe the shortage is affecting the quality of care provided by nurses and 65% believe the shortage is impacting the ability of nurses to maintain patient safety. Seven out of 10 respondents indicated they had witnessed a negative impact on the quality of patient care during the last year as a result of staffing problems.³⁸

Among chief nursing officers (CNOs) from acute care organizations nationwide surveyed within the last two years (N=45), 84% indicated that they were experiencing a nursing shortage. Of these, 66% indicated shortages were limited to specific clinical areas, type of personnel or specific shift. The remaining CNOs (34%) indicated the shortage involved all areas. Shortages resulted in emergency room diversions (50%), denied admissions (31%), and surgery delays (28%).³⁹ Similar impacts are reported anecdotally in a southern California report where limits on access, bed closures and emergency diversions have resulted from the nursing shortage.⁴⁰ Additionally, difficulty transferring patients to long-term care facilities was reported by 67% of the CNOs.³⁹ Representatives from long-term care organizations indicate that the insufficient numbers of certified nursing assistants (CNAs) as well as LVNs and RNs have resulted in a staffing crisis that affects quality of care and life for nursing home residents.⁴¹

The JCAHO report and others cite the aging workforce, job dissatisfaction, reduction in hospital resources for nursing care, inadequate educational preparation, and workload issues as contributors to the nursing shortage.^{6, 36, 37} Three strategies were identified by a JCAHO Expert Roundtable to address the shortage. First, workplace transformation is advocated to support a culture of professional satisfaction thereby encouraging retention. There is emphasis on appropriate staffing levels based on patient complexities as well as nurse skills and competencies. Second, healthcare organization support for nursing education is advocated to fund new faculty positions and provide incentives for nurses to seek advanced degrees. Third, federal support for hospital investment in nursing services is advocated based on achievement of nurse-sensitive patient care outcomes.³⁶ These strategies are similar to recommendations from a previous report from AONE. Strategies proposed for ensuring an adequate supply of nurses involve partnerships with educational institutions to educate and retain an appropriately prepared nursing staff, student recruitment initiatives and governmental support for nursing education. Changes in work environments and use of technology are listed as well as data processes related to workforce trends.³⁷

The increased demand for nurses in hospitals also is due to an increase in hospital admissions with sicker and older patients requiring care. Increasing the numbers of unlicensed assistive personnel and downsizing the RN workforce in cost-saving efforts does not provide the level of care required for these patients.³⁷ Demographic and economic factors also influence the number of RNs in the workforce. Inflation-adjusted wages for RNs have fallen or remained flat since 1993. With an economy growing until recently, many RNs found that their spouses were secure in their work and able to support families without the RN income. The aging nursing work force and resulting retirements, and the decrease in nursing program enrollments are significant contributors to the shortage of RNs.^{6, 42}

Employer Intention Survey, Hospitals

Hospitals are the largest employer of nursing personnel accounting for an estimated 59% of the RN work force.⁵ CSPCN conducted an employer survey to determine not only vacancy rates but the

intention of employers to hire nursing personnel as a measure of demand. Hospital employers were surveyed in March and April 2001 to determine: 1) the number of full-time equivalent (FTE) positions and vacancies for various categories of RNs, LVNs and unlicensed assistive personnel (UAP) for the fiscal year (FY) 2001; 2) intended budgeted positions for nursing personnel for FY 2002 and FY 2003; as well as 3) current and intended level of educational preparation of RNs. Information on the use of temporary personnel was also requested. A copy of the Employer Survey is in Appendix B.

Sample. Surveys were sent to 406 hospital nurse executives from the California Healthcare Association database in January, 2001. Follow-up postcards, telephone calls, email and personal contact with healthcare organization leadership resulted in the return of 96 surveys representing 98 hospitals (two responses included two hospitals each) for a response rate of 24%.

Types of Hospitals in the Sample. The majority of responses (92.7%, N=91) were from general acute care hospitals. One of these responses was from a rural hospital and five were from children's hospitals. The remaining seven responses (7.3%) were from psychiatric hospitals. Hospitals represented in the sample were located throughout the state.

Use of Temporary Nursing Personnel. Respondents were asked to indicate whether they used temporary nursing personnel such as registry personnel and/or traveling nurses. Of the 94 respondents answering the question, 85.4% (N=82) stated that temporary personnel were used to some extent. More than half (59.7%) of those indicating that they used temporary personnel stated indicated that temporary staff was used 5% of the time or less.

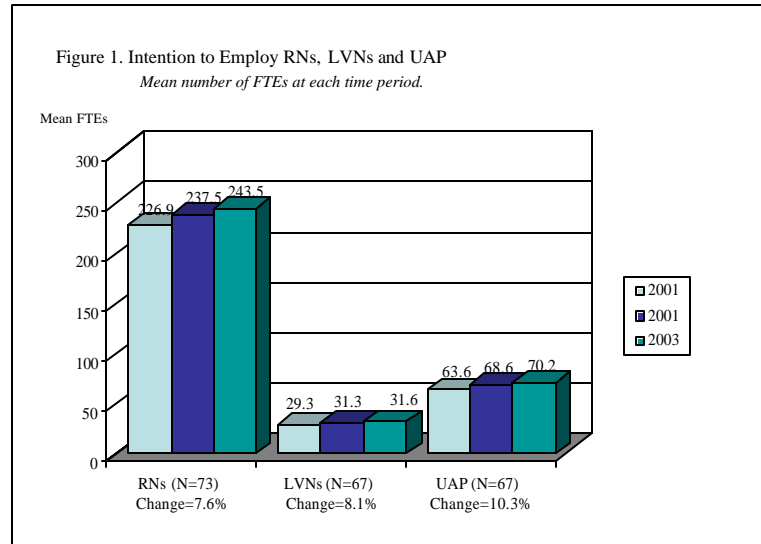
Vacancy Rates. Employers indicated vacant positions for RN staff nurses and a range of other RN positions as well as for LVN positions and unlicensed assistive personnel (UAP). The vacancy rate for RN staff positions was 11.8%. When psychiatric facilities were removed from the sample, vacancy rates were essentially unchanged. There were some differences in vacancy rates among institutions with 100 beds or more (N=37) having a vacancy rate of 10.7% compared with a vacancy rate of 12.5% in hospitals with 99 beds or fewer. The vacancy rate when all RN positions including administrators, advanced practice, quality assurance and others were included is 11.4%.

For LVNs, the vacancy rate in hospitals was 12.7% with essentially no change when psychiatric hospitals were removed. The vacancy rate in hospitals with 100 beds or more was 11.3% and 13.7% in hospitals with 99 or fewer beds.

Patterns of vacancy were somewhat different for UAP. In all hospitals combined, the vacancy rate was 11.7%. Without psychiatric hospitals, the rate was 10.7%. The vacancy rate for UAPs in psychiatric hospitals giving data for UAP (N=6) was 25.1%. Differences were also noted in vacancy rates of 12.2% in hospitals of 100 beds or more and 9.9% in hospitals of 99 beds or fewer, a reverse pattern than those seen among RNs and LVNs.

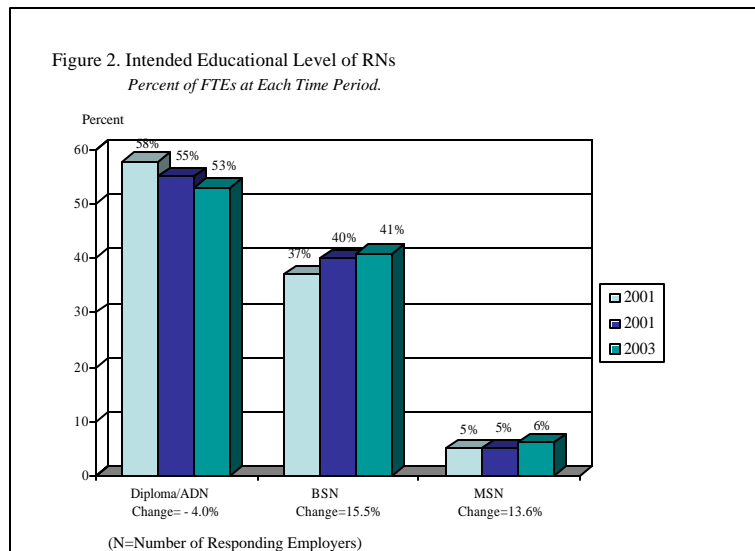
Current and Intended Employment of Hospital Nursing Personnel. In this sample, 84.1% of the FY2001 budgeted RN full-time equivalent (FTE) positions were listed as staff nurse positions. Data were provided for 73 hospitals across all three time periods for current and intended FTEs for RN staff nurses. By FY 2003, hospitals intend to *increase* RN staff nurse FTEs by 7.3%. When all RN positions are included, hospitals intend to *increase* RN FTEs by 7.6%. The percent increase in intended FTEs between 1997 and 1999 was 3.1%.¹⁵

A total of 67 hospital respondents provided data across all three time periods for current and intended employment of LVNs and UAPs. By FY 2003, there is an intended *increase* of 8.1% in LVN FTEs and a 10.3% increase in UAP FTEs. For the 1997 to 1999 period, there was a -6.5% percent *decrease* in LVN FTEs and a 4.9% *increase* in UAP FTEs.¹⁵ The most dramatic percent change is seen in the LVN FTEs. The mean number of RN, LVN and UAP positions across the 2001 to 2003 time periods are shown in Figure 1.



Educational Preparation of RN Personnel Employers were asked to provide information on the educational preparation of their total RN staff for 2001 and the intended educational preparation of RN staff for 2002 and 2003. Specifically, they were asked to provide the number and/or percent of RN staff with diploma/associate degrees, baccalaureate degrees, master's degrees and doctoral degrees. A total of 41 employers provided information for all three time periods for current and intended educational preparation of their RN staff.

The proportion of RN staff at each time period for each educational level was compared. As shown in Figure 2, hospital employers intend to *decrease* employment of RNs prepared at the diploma or associate degree level by - 4.0%, *increase* employment of nurses prepared at the baccalaureate level by 15.5% and *increase* employment of nurses prepared at the masters level by 13.8%. Two respondents added that they would like to increase the proportion of BSNs but will hire any RNs available.



Employer Anticipated Faculty Vacancy Survey, Schools of Nursing

The aging faculty work force and resulting retirements, loss of faculty to clinical positions where salaries are higher, as well as cost of living issues related to recruiting faculty were identified as factors influencing the increasing number of anticipated vacancies nationally and in California Schools of Nursing.⁸ Since the degree of impact was not known and there was no current data on the magnitude of need for additional faculty in California, a survey was designed to determine the anticipated need for faculty in schools with BSN and higher degree programs or ADN programs (Appendix C). Data were requested for the current school year (2000-2001) and for two subsequent school years (2001-2002 and 2002-2003). Surveys were returned over a two month period from 18 of 33 baccalaureate and higher degree programs (55%) and from 37 of 71 ADN programs (52%). When combined, responses were received from 55 of 104 (53%) schools.

In the responding cohort, a total of 106.75 anticipated full-time equivalent (FTE) faculty vacancies were identified for schools with baccalaureate and higher degree programs over the three-year period. The number represents an average of 5.9 FTE vacancies per program. One respondent indicated that there were no current or anticipated vacancies. A total of 118.25 anticipated FTE vacancies were identified for ADN programs, an average of 3.2 per program. Three ADN program administrators indicated that they had no current or anticipated vacancies. The total number of anticipated vacancies over the three years among all schools is 226 FTEs. However, the number is likely significantly higher since all program administrators did not respond to the survey. Using the average vacancy rate per school, baccalaureate and higher degree program non-respondents would have 88.5 vacancies (5.9 x 15 non-respondents) for a total of 195.25 anticipated vacancies. ADN program non-respondents would have 109.5 vacancies (3.2 x 34 non-respondents) for a total of 227.75 anticipated vacancies. Among all

programs, anticipated vacancies over three years would be 423 faculty FTEs. This number represents 25% of faculty employed in Schools of Nursing in 2000-2001.⁷

Anticipated vacancies for the 2001-02 and 2002-03 school years are relatively evenly split between the two years for both baccalaureate and higher degree programs and ADN programs. The majority of anticipated vacancies are for faculty with a medical-surgical (MS) nursing background.

Nurse Supply

California's supply of RNs and LVNs has not kept pace with the population growth in the state. A major factor affecting the number of RNs is the insufficient educational capacity for RN pre-licensure education. Expectations that a significant proportion of the RN work force will come to California after completing their education in other states and countries remains the model for filling RN positions.

The Current Nursing Work Force

The number of LVNs with active licenses has remained relatively stable, ranging between 64,900 and 66,000 since 1966. Currently, there are 65,930 LVNs with active licenses in California.⁴³

The number of RNs with active California nursing licenses in April 2002 is shown in Table 2. In addition to active licenses, there were 18,572 RNs with inactive licenses in April 2002. The number of inactive licenses has remained relatively constant for the past three years.⁴⁴ Numbers of RNs holding additional certificates also are listed in Table 2. Comparison data from April 2001 is presented as a basis for calculating percent change since the previous year.

Table 2. Number of RNs with Active Licenses and Number of RNs with Active Nurse Anesthetist, Nurse Midwife, Nurse Practitioner or Public Health Nurse Certificates on April 30, 2001 and 2002 with Percent Change.

License Category	April, 2001 N	April, 2002 N	Percent Change
Registered Nurse (RN)	256,692	267,459	4.2%
RNs with Additional Certificates: ^a			
Clinical Nurse Specialist	1,478	1,596	8.0%
Nurse Anesthetist	1,507	1,561	3.6%
Nurse Midwife	1,054	1,085	2.9%
Nurse Practitioner	10,224	11,062	8.2%
Psychiatric/Mental Health	407	407	0.0%
Public Health Nurse	40,363	41,063	1.7%

^aRNs with additional certificates are also counted in the Registered Nurse (RN) category.

Source: State of California, Department of Consumer Affairs, Board of Registered Nursing. License Data, 2001-2002.

Between April 2001 and April 2002, there was an increase of 10,767 RNs with active licenses in California, a number consistent with the usual number of new licenses issued per fiscal year (FY) as summarized in Table 3 for the period, 1991-2001. The number of new RN licenses issued per year has

remained relatively constant ranging between 12,626 (FY1991-1992) and 10,287 (FY1996-1997) per year. FY2000-2001 was an exception since 14,683 new RN licenses were issued. The additional 2000 licenses were issued by endorsement to individuals licensed in other states.²³ Board of Registered Nursing (BRN) staff indicated that many of these endorsements were for traveling RNs or RNs providing telehealth services to Californians while residing in other states.⁴⁵

Table 3. Board of Registered Nursing Licenses Issued by License Category, 1991-2001

License Category	Fiscal Year									
	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1999/2000	2000/01	2001/02
Endorsement-U.S.	NA	NA	NA	3111	2753	2927	3814	4329	4172	6880
Endorsement-International	NA	NA	NA	NA	645	729	746	581	708	965
California Graduate	NA	NA	NA	4906	4961	4720	4848	4736	4740	4744
International Graduate	NA	NA	NA	2021	1727	1161	1123	1122	1217	1283
Other ^a	NA	NA	NA	584	564	750	804	799	908	811
Total Issued	12,626	11,693	10,662	10,626	10,650	10,287	11,335	11,567	11,745	14,683

^a Includes Medical Corpsmen, LVN 30-unit option, Others

Source: State of California, Department of Consumer Affairs, Board of Registered Nursing. License Data, 1991-2001.

The data in Table 3 show that less than half of the new licenses are issued to graduates of California nursing programs. The number of new California graduates, further, has decreased slightly over time. The decreased graduations are due primarily to decreases in RN pre-licensure program capacity in California rather than to unfilled seats in schools of nursing. Between 15% and 22% of new licenses are issued to international graduates or by endorsement to RNs from other countries.

Proportion of Employed RNs per 100,000 Population. The national proportion of employed RNs per 100,000 population was estimated to be 782 in March, 2000 down from 798 in 1996.⁴⁶ The estimated proportions among individual states ranged from a high of 1,675 RNs per 100,000 population in the District of Columbia to a low of 520 employed RNs per 100,000 population in Nevada. California is second to the lowest in the nation with a proportion of 544 working RNs per 100,000 population. This is a decrease from 566 working RNs per 100,000 population in California in 1996.⁵

Nationally, it was estimated that 81.7% of RNs were employed in nursing. The California estimate from the national sample is that 81.4% percent of RNs who are living and working in California are employed in nursing and that of these, 67.1% are employed full time while 32.9% are employed part time.⁵ California RNs working full time represent 54.8% of all RNs with active California licenses, down from 58.7% in 1996.^{47, 48} The decrease in full time employment coincides with an increase in age of the RN work force.

Characteristics of the California RN Nursing Work Force. Characteristics of the California RN sample from the 2000 National Sample Survey⁴⁷ are presented in Table 4. Data from the 1996 National Sample Survey⁴⁸ are presented for comparison.

Age. Nationally, the aging of the nursing work force is a major contributor to the nursing shortage. Findings from the National Sample Survey of Registered Nurses show that the average age of RNs increased from 44.3 years in 1996 to 45.2 years in 2000. The average age of working RNs is 43.3 years and the average age of RNs working in hospitals is 41.8 years.⁵ In 1980, more than half of the RN population was under 40 years of age. In 2000, less than one third are under 40 years of age which reduces the pool of RNs most likely to work in acute care settings.⁶ The average age of California RNs working in nursing parallels the national average. The proportion of RNs over the age of 50 years has increased from close to a quarter of the work force to nearly a third of the work force in four years.⁴⁷

The mean age of master's prepared faculty nationally in 2001 was 48.7 years. The mean age of doctorally prepared nursing faculty was 53.2 years. Half of the doctorally prepared faculty teaching in schools of nursing in 2001 will be eligible to retire before 2008. Based on average retirement ages and sizes of age cohorts, it is likely that many will retire early.^{8,49}

Gender. Men comprised 5.4% of the RN work force nationally in 2000, up from 5% in 1996.⁵ In the California sample, 8.2% were male compared with 7.1% in 1996.⁴⁶ Based on the national sample, men in the profession tend to be younger with 38% under the age of 40 compared to 31% for women. More male RNs (88%) were employed in nursing than were female RNs (81%).⁵

Ethnicity. According to nationwide findings from the 2000 National Sample Survey, the proportion of RNs from minority backgrounds is only 12% compared to a proportion of 30% from minority backgrounds in the general population.⁴ In the California sample, 27.5% of the RNs⁴⁷ and 52% of the general population⁵⁰ are from minority backgrounds. The diversity of the work force is increasing as the older cohorts of RNs retire. Analysis of the RN sample by decade of age shows that the ethnic profile of the younger RNs more closely reflects the ethnic diversity of the state⁴⁷ (see Table D-1, Appendix D).

Educational Background. Most of the RNs working in California received their pre-licensure nursing education in an ADN or diploma nursing education program (66.4%). Nearly half of the California nursing work force received their pre-licensure nursing education in other states or countries. The highest level of education preparation attained by the RNs in the California sample is: diploma, 14.6%; ADN, 38.7%; BSN, 34.9%; and MSN, 11.8%. A total of 6.9% of the sample are certified for an advanced practice role.⁴⁷

Table 4. Characteristics of California RNs Working in Nursing: National Sample Survey Data, 1996 and 2000

Variables	National Sample Survey RNs Living and Working in California	
	1996 (N=936) ^a	2000 (N=2085) ^b
Mean Years of Age	44.1	45.2
Percent Over 50 Years of Age	27.9	32.8
Percent Who Are Male Gender	7.1	8.2
Ethnic/Racial Representation		
- Percent Asian	11.6	13.1
- Percent Black/African American	3.6	4.3
- Percent Hispanic ^c	4.7	5.6
- Percent White	78.6	72.5
- Percent Other ^d	1.4	4.5
Prelicensure Nursing Education Program		
- Percent Diploma	25.7	20.5
- Percent Associate Degree	44.4	45.9
- Percent Baccalaureate Degree	29.5	32.8
- Percent Master's Degree	0.4	0.8
Location of Pre-Licensure Program		
- Percent California	56.2	58.2
- Percent Other State	31.7	30.4
- Percent Other Country	12.1	11.4
Advanced Practice Nurse, Certified		
- Percent Clinical Nurse Specialist	1.2	1.7
- Percent Nurse Anesthetist	0.8	0.7
- Percent Nurse Midwife	0.3	0.8
- Percent Nurse Practitioner	4.1	3.7
Employment Setting		
- Percent Academic Nursing Program	1.5	1.3
- Percent Acute Care/General & Psychiatric Hospitals	63.2	62.5
- Percent Ambulatory Care	11.3	12.0
- Percent Home Health	7.5	5.3
- Percent Public/Community Health Agency	4.8	3.3
- Percent School Health	2.4	3.3
- Percent Skilled Nursing/Extended Care	4.6	4.8
- Percent Other	4.7	7.5
Percent Providing Direct Patient Care	63.2	58.1

^aSample of RNs living and working in CA is 75.2% of 1244 RNs in California sample (unweighted).

^bSample of RNs living and working in CA is 80.4% of 2594 RNs in the California sample (unweighted).

^cIncludes individuals of Hispanic origin who are White, Black, two or more races, and Other Hispanic. Individuals of Hispanic origin are not included in other categories.

^dIncludes AmericanIndian/Alaska Native, Native Hawaiian/Pacific Islander and Other.

Of the RNs receiving their pre-licensure education in ADN or diploma programs, only 13% have completed a baccalaureate or higher degree. Another 7.9% indicated enrollment in an academic program with a nursing major. These data are consistent with the California Sample Survey data collected in 1990, 1993 and 1997 by the California Board of Registered Nursing showing that approximately 18% of RNs educated in diploma and ADN programs complete a BSN.^{51, 52}

Employment Setting. Hospitals remain the primary employer of RNs. Nationally, 59% of the RN work force is employed in hospitals.⁵ In California, hospitals employ 62.5% of RNs.⁴⁷

Salaries/Earnings. In an analysis of salaries and earnings data from National Sample Surveys between 1980 and 2000, conclusions reported in the March 2000 report are that while actual earnings for RNs have increased, the increase can be accounted for by the rate of inflation. In fact, “real” earnings have not increased.⁵ This is a disincentive for individuals to seek a career in nursing.

RNs Not Employed in Nursing. Among the RNs responding to questions about why they were not currently employed in nursing, 50% indicated that their current work was more professionally rewarding. They indicated that their current positions provided more convenient hours (36.9%) and /or higher salaries (36.1%). Nearly 20% were concerned about their safety in a health care environment and 25% listed family care as a reason for not working in a nursing position. Just over 18% of the sample indicated they could not practice nursing on a professional level. Eleven percent of the sample responded they were not working because of illness or disability.⁴⁷

Current and Intended Nursing Program Enrollments

For the academic year, 2000-2001, California had 97 RN pre-licensure nursing education programs. Of these, 71 are ADN programs, 22 are BSN programs and four are masters entry-level options or programs (ELM). Three of the ADN, nine of the BSN and two of the ELM programs are in private schools.⁵³ There were 10,021 applications for admission and 6,670 admission opportunities available. Most of the capacity is in the ADN programs (N=4540, 68%). The current capacity represents an increase of 424 enrollment opportunities since the 1999-2000 academic year.⁵⁴

Current Enrollments. The California BRN Annual School Report for 2000-2001 shows that 92.77% of all new RN pre-licensure nursing education places were filled at the October reporting period (94.6% ADN; 88.7% BSN; 90.4% ELM).⁵⁴ For the past five reporting periods, the percent of enrollments filled has ranged from 96.9% in 1997-98 to 92.6% in 1999-2000. Additional data would be required to ascertain the proportion of enrollment capacity filled at the beginning of the school year, number of students who subsequently drop the program, and whether unfilled enrollments are in private rather than public programs. Many of the programs in publically supported schools continue to have waiting lists.

Resource availability was reported by 92 schools. Of these, 68 (73.9%) indicate that resources limit or restrict admissions. Among these 68 schools, 53 (78%) are limited by faculty availability, 49 (72%) by space, 47 (69%) by funding and 32 (47%) by other factors.⁵⁴

Nationally, the American Association of Colleges of Nursing (AACN) reports that the number of RN pre-licensure baccalaureate enrollments increased for the 2001-2002 school year after six years of decline. Enrollments remain lower than prior to the start of the enrollment decline, however.^{55,56}

Intended Enrollments. Intended new RN pre-licensure admissions for the academic years, 2001-2002 and 2002-2003 are shown by program type in Table 5. Enrollment data from the 2000-2001 academic year are included for comparison. Data indicate that intended enrollments were expected to decrease slightly (N=12) in the ELM over the two year period. These decreases have not occurred and enrollments have increased due to new and expanded ELM programs.⁵⁷ There is an expected reduction of capacity by approximately 200 new admissions per year in BSN programs. The closure of one private university nursing program does not account for the total decrease in BSN program capacity. ADN programs expect to increase enrollments by 458 new admissions over the three years. Overall, there is an increase of 245 new admissions projected by 2003. In 2002-2003, ADN programs will account for 72.3% of California RN pre-licensure nursing education slots.

Table 5. Current and Intended RN Pre -Licensure Nursing Program Capacity by Academic Year and Program Type

Type of Program	Academic Year		
	Reported for 2000-2001	Intended for 2001-2002	Intended for 2002-2003
ELM	177	171	165
BSN	1953	1749	1752
ADN	4540	4784	4998
Total	6670	6704	6915

Source: State of California, Department of Consumer Affairs, Board of Registered Nursing. Annual School Report, 2000-2001.

RN Pre -Licensure Program Completions

There were 5,178 program completions during the 2000-2001 school year. Of these, 3,799 (73.4%) were from ADN programs, 1,277 (24.7%) were from BSN programs and 102 (1.9%) were from ELM programs.⁵³ The total number of completions has remained fairly constant for the past ten years.

Attrition. The attrition rate is the proportion of students who exited the RN pre-licensure program prior to completion divided by the total number of enrolled students. The attrition rate reported for 2000-2001 varied among the program types: ADN 21.3%; BSN 9.0%; and ELM 3.3%.⁵⁴

Ethnic Diversity. The BRN Annual School Reports show a steady increase in the proportion of RN pre-licensure students from minority backgrounds over the past five years. In 1996-97, half of the students were minorities. The 2000-2001 school report shows that 57.5% of first year RN pre-licensure students and 54.2% of graduates were from minority backgrounds.²⁵ The current proportion of minority students compared to White students in nursing programs closely parallels population proportions. Specific categories of ethnic minority classifications, however, do not reach population parity. For example, the proportion of Hispanic RN pre-licensure students is lower than the proportion of Hispanics in the general population in California while the proportion of Asian students is higher.⁵⁰ The ethnic

background of newly admitted and completing students for the 2000-2001 academic year is shown in Table 6.

Table 6. Ethnic Diversity of RN Pre-Licensure First Year Students and Completers, 2000-2001 Academic Year

Ethnicity	2000-2001 Academic Year	
	First Year Students (%)	Completions (%)
African-American	9.2	7.8
Asian	10.7	10.6
Filipino	11.4	10.7
Hispanic	19.9	19.8
Native American	0.8	0.7
White	42.6	45.8
Other/Unknown	5.4	4.6

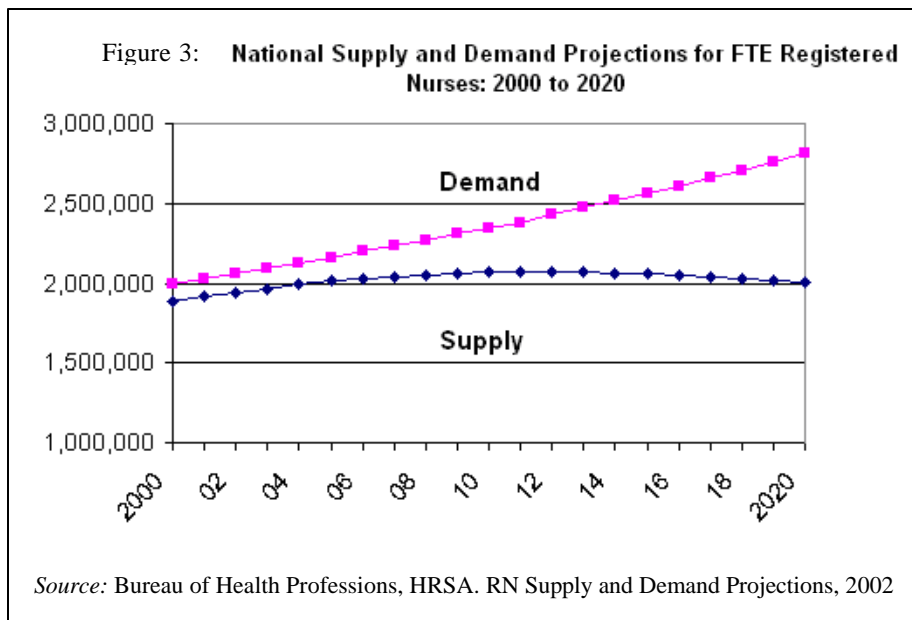
Source: State of California, Department of Consumer Affairs, Board of Registered Nursing. Annual School Report, 2000-2001.

Gender Diversity. Comparative gender enrollment data are available for baccalaureate RN pre-licensure programs for the 2000-2001 school year. Nationally, the proportion of enrolled students who are male was 9.2%⁵⁵ compared with 12% of students in California.⁵⁴ Men comprised 10.3% of the graduates for that year nationally⁵⁵ and 11.9% of completions in California.⁵⁴

Meeting the Demand for Nurses in California

California is in the midst of a nursing shortage that impacts access to care, threatens public health as well as patient safety and has the potential to negatively affect quality of care. California does not have a sufficient supply of adequately prepared nursing personnel to meet current demand. The aging RN work force, population growth coupled with an increase in the proportion of elderly, flat earnings, alternative job opportunities, declining numbers of nurse graduates nationally, and work place issues exacerbate the supply problem. Further, nursing education programs do not have the resources to increase capacity under current funding constraints. A growing shortage of faculty compounds the problem.

California is not alone. National projections of supply, demand and shortages of RNs were completed by the federal Bureau of Health Professions using the 2000 National Sample Survey database. In 2000, the FTE supply of RNs was estimated at 1.89 million. The demand was estimated at 2 million resulting in a shortage of 110,000 (6%) RN FTEs in 2000. These findings indicate that the national shortage of RNs expected around 2007 was already present in 2000 as is shown in Figure 3. Calculations for individual states identify that the shortfall in California was at 8% of RN FTE positions in 2000 and is projected to reach 21% by 2010.¹



Unchecked, the national RN shortage is projected to grow to 29% by 2020. Projected shortages are based on a 6% increase in supply and a 40% increase in demand for the period. The number of RNs leaving the profession, additionally, will exceed the number that enter the profession by 2011 if the current nursing program enrollment levels continue. These projections are based on a 1.7% per year growth rate in demand which is more conservative than the rate of 2.3% per year projected by BLS.¹

California has no parameter that allows an opportunity for quick adjustment in RN. The proportion of RNs per 100,000 population is already among the lowest in the nation. California already relies on other states and countries for more than 50 percent of its nursing work force at a time when enrollments nationally are not increasing sufficiently to meet requirements. California RN pre-licensure programs are almost universally subscribed. Intention to increase enrollments is promising but is occurring at the level of the ADN rather than the BSN or MSN levels where demand is greatest.⁵³ Employer demands for increased proportions of baccalaureate and higher degree graduates will not be met if programs cannot increase enrollments. Difficulty in recruiting faculty contributes to the problem.

Current Initiatives to Address the Nursing Shortage

The Federal Nurse Reinvestment Act of 2002. The Nurse Reinvestment Act (H.R. 3487) was passed by the Senate and the House of Representatives on July 22, 2002 and signed into law by President Bush on August 1, 2002 (P.L.107-205). Among the provisions in the Act are scholarships for students who agree to work in nursing shortage areas after graduation; grants to health care facilities to develop best practices in nursing administration and retain experienced nurses; grants to enhance education in geriatric nursing care for nursing assistant, LVN and RN preparation; career ladder grants to encourage

nurses to further their education; and funding for public service announcements that promote nursing. Efforts are underway to assure that the Act is funded.

California Nursing Workforce Initiative. In January of 2002, Governor Gray Davis announced establishment of the Nursing Workforce Initiative (NWI) to be funded primarily from California's federal Workforce Investment Act (WIA) funds. A total of 60 million dollars over three years are proposed to expand nurse training and retention. The initiative is expected to provide \$24 million over three years to educate 2,400 nurses either as new nurses, nurses re-entering the profession, or for current nurses to expand their qualifications. Another \$6 million will fund the Central Valley Health Careers Training Program to address local needs primarily for nurses and psychiatric technicians. A total of \$24 million will address health careers training through regional collaboratives. Other initiatives include funding the RN loan repayment program, expanding career ladders, encouraging workplace reform, implementing a statewide recruitment campaign and standardizing curricula.

California Education and Service Partnership Initiatives. Wide-ranging initiatives are underway in many regions of California in an effort to address the growing nursing shortage pragmatically. These initiatives have been spearheaded by regional health care associations, universities in partnership with statewide, regional or local healthcare systems, universities in partnership with regional hospital consortia and through college alliances. Creative approaches to the education of new nurses, continued preparation of current nurses into baccalaureate and higher degree programs, and efforts to address work place issues that influence retention are underway. Reliance on governmental action alone to solve the problems is not an option. Health care providers and nurse educators are working together to assure access to quality health care for Californians.

Progress Toward Goals

Articulation of Nursing Education Program Requirements. In 1999, CSPCN called for further work on program articulation so that transitions are streamlined and predictable between LVN, ADN and baccalaureate (BSN) educational programs. While some of the work on articulation was accomplished over a decade ago, much has been accomplished recently through the California State University Nursing Alignment Taskforce and the Intersegmental Major Preparation Articulated Curriculum (IMPAC) Project. Work is continuing toward a common set of prerequisites and required courses to facilitate transfer between programs. Regionally, educational partnership models among programs have been undertaken. These unique and creative nursing education programs move students directly into the BSN path while capitalizing on the strengths of the ADN and BSN programs.

Nursing Student Diversity. CSPCN also supported recruitment and retention of a diverse student population by ethnicity and gender. During the past three years, the proportion of both ethnic minority students and male gender students has increased. In fact, the proportion of students from

minority backgrounds now accounts for over half the students enrolled and graduating from California nursing programs.

The Nursing Workforce Advisory Committee. The Nursing Workforce Advisory Committee was appointed by the Board of Registered Nursing (BRN) in November 2001. This 16-member advisory committee is composed of consumers, health workforce planners, nursing service, nursing education, professional associations, unions, and government agencies. The purpose of the Nursing Workforce Advisory Committee is to advise the members of the BRN and Board staff on current and projected issues affecting the nursing workforce. Special focus is on data about the supply and demand of nurses, issues affecting the ability of nurses to provide safe, accessible patient care, and strategies to recruit and retain student nurses, nursing faculty, and direct care nurses. Appointment of the Advisory Committee fulfills a CSPCN goal to for data collection and policy support over the long term.

State Support for RN Pre -Licensure Education

The California Employment Development Department (EDD) projects a demand for 109,600 additional RNs by 2010 for all segments of care. This is almost 40% more RNs than were working in 2000. EDD also projects a demand for an additional 25,400 licensed vocational nurses (LVNs) by 2010, an increase of nearly 50% in the number of LVNs. Hospital employers responding to the California Strategic Planning Committee for Nursing (CSPCN) Employer Intention Survey indicated a vacancy rate for RN full-time equivalent (FTE) positions in hospitals of 11.8% in 2000-2001. In 2002, a 15% vacancy rate in hospitals was reported by the California Healthcare Association. Beyond hospitals, the California nursing shortage is listed as a major health care delivery issue statewide by organizations and agencies such as those concerned with long-term care, public health, and home health. A federal analysis of RN supply and demand based on the 2000 National Sample Survey of Registered Nurses was conducted recently by the Bureau of Health Professions. Analysts identified that deficits in RN supply previously projected for 2007 were already present in 2000 at a rate of 6% for the nation and 8% for California.

In California, RN pre-licensure nursing programs are almost universally oversubscribed and many, particularly in public institutions, still have long waiting lists. Yet, the capacity of nursing education programs did not increase for over a decade. Only within the last two years has capacity increased in some programs. The 1999 CSPCN Phase II report recommended that nursing program capacity be increased and that the increase be underwritten with state funds. The legislature has failed to support nursing education. Industry and education partnerships have been formed or strengthened for the short term to increase enrollments through local and regional initiatives. Some of the partnerships are aimed at creating new RN pre-licensure enrollment opportunities. Others provide on-site baccalaureate completion programs for RNs who graduated from associate degree in nursing (ADN) programs in support of their need for baccalaureate -prepared RNs.

Among California nursing education programs, there is significant concern that requirements for RN faculty who are master's and doctorally prepared will be not be met. Nationally, faculty shortages are cited as one reason nursing education programs are not increasing capacity.

Legislative support is needed in California to increase program capacity by expanding current programs and creating new ones. Scholarships are needed to support students who attend programs in public or private institutions. Increased support of direct entry baccalaureate and masters level RN pre-licensure programs is extremely important given the increased demand for nurses prepared at those levels. Baccalaureate and masters degree graduates have the requisite skills desired by employers and form the pipeline to graduate education required for nurse educators, nurse administrators and advanced practice RNs. Currently, only 27% of RN pre-licensure enrollment opportunities are in these programs and nearly half are in private schools; the remaining 73% are in ADN programs. Education and service partnerships are critical and valuable but do not replace substantive funding to support educational programs for the long term. In 2000-2001 there were approximately 40% more applicants for nursing education programs than could be enrolled because there was no space for them. Interest in a nursing career is increasing. Program capacity is clearly insufficient to meet projected demand and is dependent on adequate funding for faculty.

Recommendations

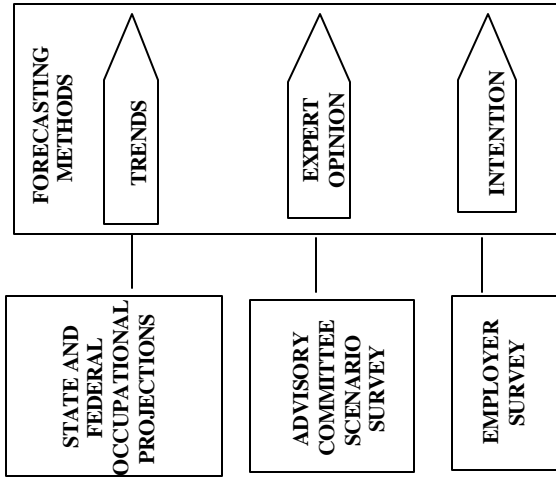
The following recommendations are based on the current nurse supply and demand factors in California. CSPCN recommends that state funds be allocated to:

1. Directly support a state-determined RN pre-licensure class size and provide funds directly to programs rather than leaving decisions to fund nursing education to individual campuses.
2. Fund increased RN pre-licensure nursing education capacity by expanding current programs and creating new ones in the University of California, California State University and California Community College systems.
3. Change the mix of RN pre-licensure student placements to meet employer demand so that 40% of student enrollments are in baccalaureate and masters-level entry programs and 60% are in ADN programs (the current proportions are 30% and 70%).
4. Provide scholarship support for RN pre-licensure nursing students enrolled in private as well as public nursing programs.
5. Support local and regional partnerships for nursing education through grants and scholarships.
6. Fully fund the Board of Registered Nursing to provide data on a continuing basis to direct policy decisions related to an adequate supply of licensed nursing personnel.

Appendix A

STRATEGIC PLANNING MODEL FOR CALIFORNIA'S FUTURE NURSING WORKFORCE

DETERMINING NURSE DEMAND

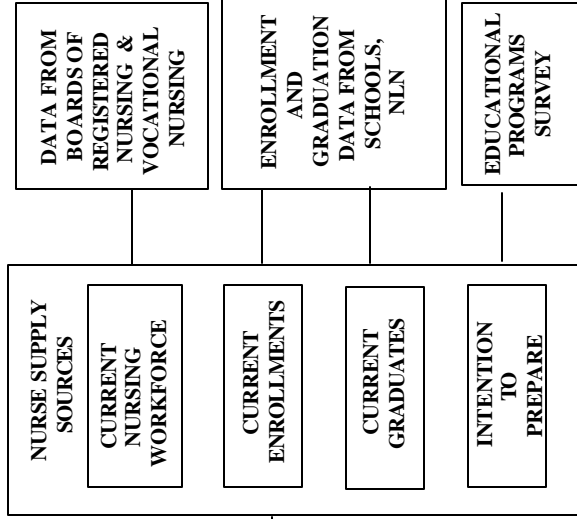


NURSES DEMANDED
APN
RN
LVN

NURSE SUPPLY
APN
RN
LVN

STRATEGIC PLAN

DETERMINING NURSE SUPPLY



MEETING CALIFORNIA'S HEALTH CARE NEEDS

Appendix B



CALIFORNIA STRATEGIC PLANNING COMMITTEE FOR NURSING
 COLLEAGUES IN CARING:
Regional Collaboratives for Nursing Work Force Development



NURSING WORK FORCE SURVEY

Employers of nurses are concerned about whether California's supply of nurses is adequate to meet demand. Answers to the following questions will be summarized with those of other employers to determine the future demand for various types of nursing personnel. Please complete and return this form to: CSPCN, University of California, Irvine, Room 290, Bldg. 802, Irvine, CA 92697-4089; (949) 824-3842 (FAX). If you have questions about this form, please call Karen Sechrist or Ellen Lewis at the CSPCN/CIC office, (949) 824-7057 or 824-8932.

SECTION A: CHARACTERISTICS OF THE ORGANIZATION

1. Please provide a DESCRIPTION of the ORGANIZATION for which you are responding. Examples include: Public Health; Inpatient Hospital; Home Health Agency; Skilled Nursing Facility; Physician's Office; Outpatient Surgery Center.

DESCRIPTION OF ORGANIZATION: _____

2. For how many patients/clients does your organization or organizational component provide medical or health-related services on a typical day?

NUMBER OF PATIENTS/CLIENTS: _____ NOT APPLICABLE (Skip 3a and 3b)

3. Does the organization for which you are responding use temporary, registry, or traveling personnel? YES NO

If yes, what percentage of nursing services are covered by temporary, registry or traveling personnel on a typical day? _____%

SECTION B: EMPLOYMENT OF NURSING PERSONNEL

1. NURSING PERSONNEL CATEGORIES

For each of the following categories, please provide data on current Vacant Full Time Equivalent Positions (FTEs), Current budgetd FTEs, FTEs you intend to budget in FY2002 and FTEs you intend to budget in FY2003. A list of definitions for FTE and for personnel categories is included as a reference.

NURSING PERSONNEL CATEGORY	Vacant Budgeted FTEs	Current Budgeted FTEs	FTEs INTEND to Budget in FY 2002	FTEs INTEND to Budget in FY 2003
REGISTERED NURSES (RNs) employed as:				
a. Staff Nurses				
b. Administrator/Supervisors/Managers				
c. Case Managers				
d. Discharge Planners				
e. Telephone Advice Nurses				
f. Quality Assurance Staff				
g. Infection Control Practitioners				
h. Credentialed Public Health Nurses (PHN)				
i. Credentialed School Nurses				
j. Clinical Nurse Specialists (CNS)				
k. Inservice Educators				

1. NURSING PERSONNEL CATEGORIES (Continued):

NURSING PERSONNEL CATEGORY	Vacant Budgeted FTEs	Current Budgeted FTEs	FTEs INTEND to Budget in FY 2002	FTEs INTEND to Budget in FY 2003
l. Patient Educators				
m. Occupational Health Nurses				
n. Nurse Practitioners (NP) (Please provide data for specific types of NPs):				
• Adult Nurse Practitioners				
• Family Nurse Practitioners				
• Pediatric Nurse Practitioners				
• Geriatric Nurse Practitioners				
• OB/GYN Nurse Practitioners				
• Other Nurse Practitioners (Please List): _____				
o. Certified Nurse-Midwives (CNM)				
p. Certified Registered Nurse Anesthetists (CRNA)				
q. First Assistants				
r. Other RN Category (Please List): _____				
LICENSED VOCATIONAL NURSES (LVNS)				
UNLICENSED ASSISTIVE PERSONNEL				

2. EDUCATIONAL BACKGROUND OF RNS

Consider all of your Registered Nurse (RN) employees as a group. Please enter **EITHER** the **NUMBER** of RNs **OR** the **APPROXIMATE PERCENTAGE** of RNs employed by your organization currently who have a Diploma or Associate Degree, Baccalaureate Degree, Master's Degree or Doctoral Degree. Also provide the number **OR** approximate percentage of RN employees for each educational level you intend to employ in FY2002 and in FY2003.

HIGHEST EDUCATIONAL LEVEL OF REGISTERED NURSE EMPLOYEES	Current Employees		Intend to Employ in FY 2002		Intend to Employ in FY 2003	
	Number (N)	Percent (%)	Number (N)	Percent (%)	Number (N)	Percent (%)
Diploma or Associate Degree						
Baccalaureate Degree						
Master's Degree						
Doctoral Degree						
TOTALS						

SECTION C: RESPONSE INFORMATION (Not Required)

1. Name Of Individual Responding: _____
2. Telephone Number: (_____) _____



ANTICIPATED NEED FOR NURSING FACULTY

Deans and directors of nursing programs are very concerned about having sufficient faculty for current and expanding programs. At a recent meeting of the CSPCN Implementation Oversight Committee, the question of numbers and types of faculty vacancies was raised and could not be answered with current data. Please provide information on current vacancies and additional vacancies you anticipate over the next two years based on expected retirement of faculty and possible expansion of programs. Space is provided at the end of the form to qualify responses or add additional categories of nursing faculty that may not be included in the form. Please complete and return this form to Jean Harlow at the current meeting or fax the form to CSPCN at (949) 824-3842 (FAX). If you have questions about this form, please call Karen Sechrist or Ellen Lewis at the CSPCN/CIC office, (949) 824-7057 or 824-8932.

School Name: _____

1. CURRENT AND ANTICIPATED FACULTY VACANCIES BY SPECIALTY

For each of the following specialties, please provide data on current vacant full time equivalent faculty positions (FTEs), anticipated faculty FTE vacancies for FY2002 and anticipated faculty vacancies for FY2003. Please use FTEs since more than one person may fill each position. Please indicate a half-time FTE as .5 and a quarter-time FTE as .25. For each of the school years, indicate only the new or additional FTEs anticipated for that year.

NURSING FACULTY BY SPECIALTY	Vacant Budgeted FTEs for 2000-2001	Anticipated Vacant FTEs for 2001-2002	Anticipated Vacant FTEs for 2002-2003
1. Community Nursing			
2. Medical-Surgical Nursing			
3. Pediatric Nursing			
4. Psychiatric Nursing			
5. Family Nurse Practitioner			
6. Specialty Nurse Practitioner (Please List Specialty) _____ _____			
7. Nursing Administration			
8. Nursing Education			
9. School Nursing			
10. Nurse Anesthesia			
11. Nurse Midwifery			
12. Other (Please List) _____ _____			

(Continued on Reverse Side)

2. EDUCATIONAL BACKGROUND OF NEEDED FACULTY

What is the required educational background of faculty needed to fill current and anticipated vacancies? Please indicate the required educational level by FTEs for each of the year and the desired education level by FTEs for each of the years.

Educational Background	Current Vacancies 2000-2001		Anticipated Vacancies 2001-2002		Anticipated Vacancies 2002-2003	
	Required (FTEs)	Desired (FTEs)	Required (FTEs)	Desired (FTEs)	Required (FTEs)	Desired (FTEs)
Baccalaureate Degree						
Master's Degree						
Doctoral Degree						
TOTALS						

3. RECRUITMENT DIFFICULTIES

For which position(s) do you have the most difficulty recruiting?

4. COMMENTS

Please include additional categories of nursing faculty not addressed, any qualifying information for any of the categories and any other information about the need for faculty that will be useful for future policy initiatives.

Appendix D

Table D-1: Ethnic Diversity of the California Nursing Workforce by Decade: Percent of Group by Decade

Ethnic Group	Agegroup					Total (N=2053) %
	20-29 (N=142) %	30-39 (N=438) %	40-49 (N=800) %	50-59 (N=516) %	60 & Over (N=157) %	
Amer. Indian/Alaska Native	0.0	0.5	0.6	0.0	0.0	0.3
Asian	21.8	13.0	13.5	12.6	4.5	13.1
Black/African American	0.7	4.6	4.6	4.8	3.8	4.3
Hispanic ^a	11.3	9.8	4.5	4.1	0.6	5.6
Native Hawaiian/Pacific Islander	2.8	2.7	1.1	1.2	0.0	1.5
White	62.0	66.9	72.8	75.2	87.3	72.5
Other	1.4	2.5	2.9	2.1	3.8	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

^aIncludes Hispanics who are White, Black, two or more races, and Other Hispanic. Individuals of Hispanic origin are not included in other categories.

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