

**REPORT OF THE
VIRGINIA PARTNERSHIP FOR NURSING AND
VIRGINIA COMMONWEALTH UNIVERSITY**

Study of Nursing Education in Virginia

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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Executive Summary: HJ 664 Study of Nursing Education in Virginia

The stability of Virginia's health care system is dependent on an adequate supply of appropriately educated and skilled nurses. Nurses are the largest single group of health care providers. Virginia, along with the entire nation, stands on the threshold of what is forecasted to be a nursing shortage so great that the public's health will be threatened. House Joint Resolution (HJR) 664 of the 2001 Session of the General Assembly directed a study of education programs for registered nurses and licensed practical nurses in Virginia to determine whether the capacity of Virginia's RN and LPN nursing education programs needs to be increased to meet future demands.

Fundamental shifts are occurring in Virginia that increase the need for nurses at a time when the supply is declining. An aging population, changes in the delivery of health care that require more nurses, an aging nursing population and the decrease in applicants to nursing programs have led to a shortage unlike past shortages. Interest in nursing has been declining. Educational Institutions are facing unprecedented numbers of faculty retirements.

Past nursing shortages have followed recurring cycles. Permanent solutions to past shortages have not been achieved. A critical shortage of nurses has begun. A permanent solution to the nursing shortage is needed. The solution must include changes in working conditions as well as increasing the supply of nurses. Improving working conditions is and primarily the responsibility of health care organizations. Increasing the supply of nurses is the responsibility of the Commonwealth.

The nursing shortage affects every sector of health care and nursing education. This report focuses primarily on entry level nursing education programs and the recruitment of new nurses. However, nurses with advanced education are also needed but the need is not as critical as the need for new nurses.

Virginia has experienced slow growth in the numbers of RNs and LPNs throughout the 1990s. In 2001, the first decline in the number of LPNs occurred. Past growth of the nursing population has been due to the infusions of newly educated nurses and by nurses who move into Virginia. Demand for nurses continues to rise and overall enrollment in nursing programs has declined. By 2020, Virginia will experience a 30 percent deficit in the number of nurses needed by health care facilities. Growth in the supply of nurses cannot be maintained without an increase in nursing program enrollments.

Nursing education programs in Virginia are spread across the Commonwealth and increasing enrollment in existing programs provides the most effective and fastest means of increasing the supply of nurses. A statewide recruitment plan is needed to assure that potential students are aware of the opportunities in nursing, the educational program options and the scholarship and loan repayment programs.

Expansion of nursing programs, as a phased process, will provide for an immediate increase in nursing graduates, as a first step, and the development of a long-term plan for sustained program growth. Scholarship and loan repayment funds must be increased to make nursing education more accessible. Large numbers of faculty will retire during the next ten years as education programs are expanding. New faculty must be educated and emphasis placed on preparing masters and doctoral

students for faculty positions. Faculty workload is heavy and salaries are low and these issues must be addressed if the necessary faculty is to be recruited.

Virginia has to address the shortage now or suffer the consequences of inadequate staffing, limited access to health care and the potential of increased errors and adverse outcomes in health care settings. Failure to take action will exacerbate the problem. A coordinated public/private response is needed to reduce the negative impact on the health of Virginians.

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Table of Contents

Executive Summary2

Table of Contents5

I. Authority for the Study.....6

II. The Supply of Nurses in the US and Virginia7

III. Education Programs in Virginia 18

IV. Policy Options for Nursing Education29

Appendices

A. HJR66433

B. Nursing Programs in Virginia.....35

C. VPN – The Virginia Partnership for Nursing38

I. Authority for Study and Organization of Report

House Joint Resolution (HJR) 664 from the 2001 Session of the General Assembly directed the Virginia Partnership for Nursing, in cooperation with the Virginia Nurses Association, the Virginia League for Nursing, the Virginia Association of Colleges of Nursing, the Virginia Council of Associate Degree Nurse Program Heads, the Virginia Health Occupations Education Association, the Assembly of Hospital Schools of Nursing in Virginia, the Virginia Organization of Nurse Executives, the Virginia Hospital and Healthcare Association, the Virginia Health Care Association, the Virginia Association of Nonprofit Homes for the Aging, the Virginia Association for Home Care, the State Council of Higher Education for Virginia, the Virginia Board of Nursing and other interested groups, to conduct a study of education programs for registered nurses and licensed practical nurses in Virginia. A copy of HJR 664 is provided in Appendix A.

This report is designed to assist Virginia's policy makers and health policy planners understand the supply, demand and distribution of registered nurses and licensed practical nurses and to develop policies that assure the availability of a qualified nursing workforce to meet the health care needs of Virginians. The report is organized in four major sections. Section I presents the authority for the study and organization of report. Section II presents data related to the nursing workforce and shortage. Section III presents findings of the study of nursing programs for registered and licensed practical nurses in Virginia. Section IV presents policy options to expand nursing education and increase the supply of nurses in Virginia.

II. The nursing workforce – understanding the shortage

There have been fundamental shifts in the age of Virginia's population, in the delivery of health care and in the nursing workforce. The effect of the changes is the beginning of a critical shortage of nurses. Virginia's population over the age of 65 years, the group that uses the greatest percentage of health care services, is growing rapidly. The nursing workforce is aging faster than the general population and there has been a decline in interest in the profession as a career option. A variety of governmental and privately funded studies conclude that the present educational and health care systems must change if an adequate supply of nurses is to be available to meet the health care needs of the future. The shortage of nurses may well be the public health crisis of the next decade.

Nurses are the largest single group of health care providers. The stability of Virginia's health care system is dependent on an adequate supply of appropriately educated and skilled nurses. In HJR 664, the Virginia General Assembly requested that the Virginia Partnership for Nursing, in coordination with other nursing and health care organizations, conduct a study of nursing education programs for Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) in the Commonwealth. The focus of this study is to provide policy options that will increase the number of persons enrolling in and graduating from Virginia's RN and LPN nursing education programs. Specific components of the study are:

1. Whether the capacity of Virginia's RN and LPN education programs should be increased to meet future demands;
2. What actions are needed to recruit and retain more nursing faculty;

3. Whether curriculum changes are needed to ensure that RN and LPN nursing education programs will meet future nursing workforce demands;
4. Whether greater or lesser emphasis should be placed on certain types of RN degree programs and,
5. Other appropriate issues related to RN and LPN nursing education.

Demand for nursing care

Virginia is the 12th most populous state in the nation with more than seven million residents. Between 1980 and 2000 the total population of the Commonwealth has increased by 31 percent, compared to the 21 percent increase in the population nationally. It is projected that there will be an additional population increase of 17 percent by 2020, bringing the population to 8.5 million. Blacks/African Americans represent 25 percent of the population of Virginia compared to 12 percent of the total U.S. citizens. In 2000, Hispanics made up 4 percent of Virginia population compared with 11 percent nationally. It is expected that the Hispanic population will have the greatest growth of any ethnic group through 2020. Virginia is an attractive area for immigration and the US Census Bureau projects that Virginia will have the eighth largest gain in population due to immigration in the US through 2025. Great ethnic, racial and cultural variety exists across Virginia and this variety presents a challenge to health care providers.

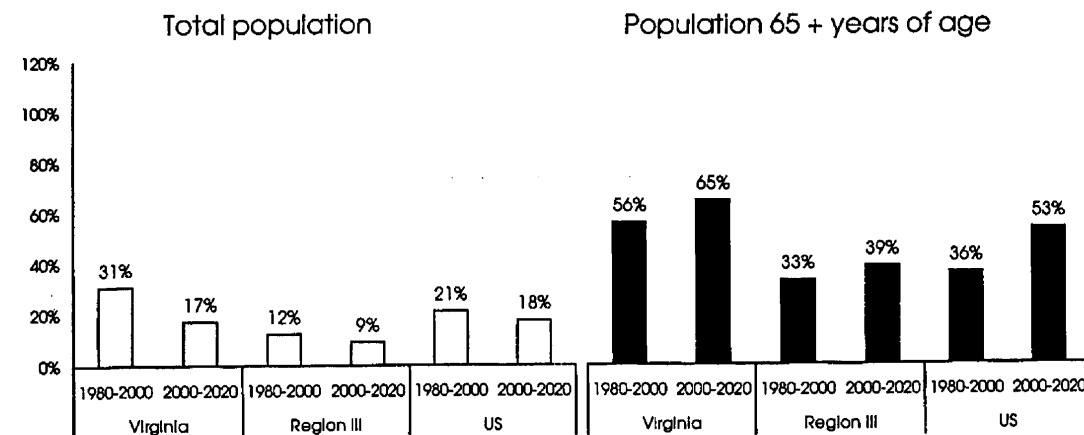
Virginia is experiencing a significant expansion in its population of older adults. From 1980 to 2000, the Virginia population aged 65 years and over grew by 56 percent and is projected to increase by an additional 65 percent by 2020 (see Figure 1). Older persons have more chronic health problems and use the health care system

more frequently than other segments of the population, thus the growth of this population will increase the demand for health and nursing care services. Today, individuals over 65 make up 11 percent of the total population but represent 35 percent of the hospital population.

Figure 1: Changes in Virginia’s Population Profile

POPULATION PROFILE

Projected percentage change in total population & population 65 + years of age, 1980-2000 & 2000-2020



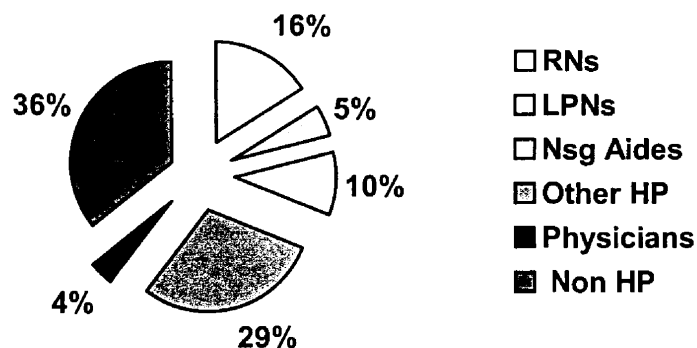
Source: Bureau of the Census.

The supply of nurses in the US and Virginia

In the US, the health care workforce accounts for 10.9 percent of the total workforce. There are 14 million healthcare workers and licensed nurses are the largest single group. There are approximately 2.7 million RNs nationally, 16 percent of the health workforce (see Figure 2). The total percentage of RNs increased by 5.4

percent between 1996 and 2000 but this was the smallest increase ever reported by the US Health Resources and Services Administration (HRSA). Licensed Practical Nurses comprise another 5 percent of the national workforce. Unlicensed personnel, aides and attendants comprise an additional 10% of the health care workforce. ¹ There are shortages of nurses reported across the nation and the world and Virginia will be unable to recruit nurses from other states and countries to eliminate the Commonwealth's nursing shortage.

Figure 2: Nurses: the Cornerstone of the Health Workforce



Source: National Sample Survey of Registered Nurses 2000

The measure used to determine a state's ability to provide for the health of the population is the ratio of employed RNs to population. In 1996, Virginia had 787 RNs per 100,000 population compared to 798 for the US average and 263 LPNs per

¹ HRSA State Health Workforce Profile, Virginia Bureau of Health Professions, 2000

100,000 population compared to 249 for the US average. Virginia ranked in the bottom 40 percent of the nation on the RN to population ratio. In Virginia, RN employment is projected to increase 8.4 percent (1996 base through 2006) compared to 11.2 percent nationally. LPN employment is projected to increase 13.5 percent compared to 9 percent nationally. The average age of nurses in the Southeast is older than the national average age of 45.2 years and Virginia can anticipate larger numbers of nurses retiring.²

By 2020, the projected national supply for the RN workforce will be 20 percent below the predicted demand. The U.S. Bureau of Labor Statistics estimates that growth in job opportunities for RNs in Virginia will continue and there will be a total of 794,000 new job openings for RNs through 2008 and employers will need to replace an additional 331,000 RN's as a result of retirements between 1998 and 2008.³ Virginia will experience a more significant shortage. By 2020, Virginia will experience a 30 percent deficit in the number of nurses required by health care employers.⁴

In 2001, Virginia has 83,735 licensed RNs and 26,544 LPNs (see Figure 3).⁵ The Virginia Nurses Survey: 2001 identified only 62,431 RNs and 23,249 LPNs living in Virginia.⁶ This number is a more realistic estimate of the real supply of nurses in

²National Sample Survey of Registered Nurses, Division of Nursing, Bureau of Health Professions, HRSA, 2000.

³Dohm, Arlene. Gauging the Labor Force Effects of Retiring Baby-Boomers. Monthly Labor Review, July 2000.

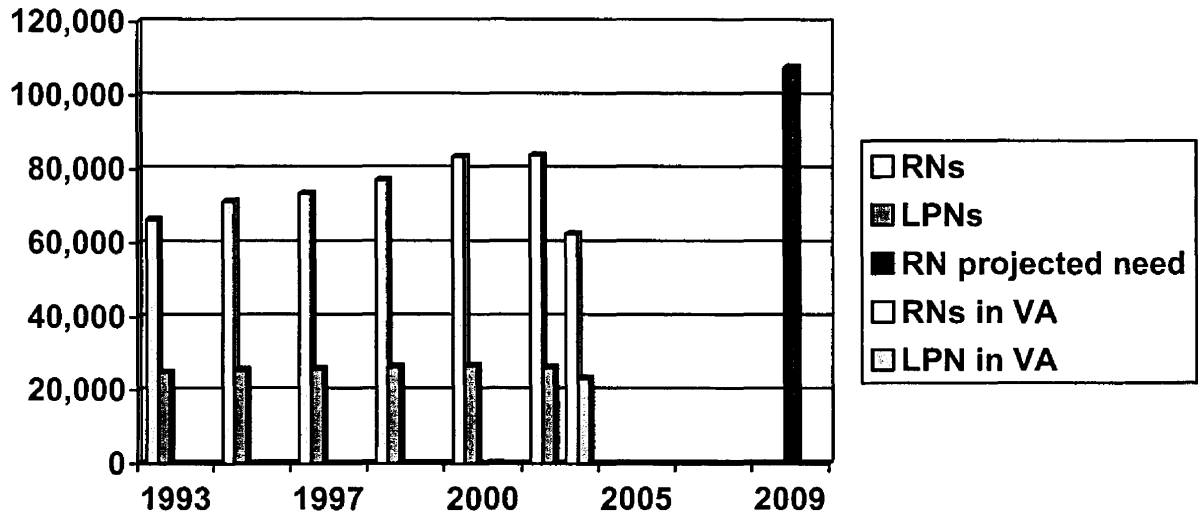
⁴Brown, Barbara S. Vital Signs: Status of Virginia's Hospital Workforce, 2000.

⁵Virginia Board of Nursing, Data from August 2001.

⁶ Virginia Tech Center for Survey Research. Virginia Nurses Survey: 2001, 2001

Virginia than the number of nurses licensed. After years of small increases in the number of LPNs licensed in the Commonwealth, a small decline occurred in 2001. The numbers of new graduates licensed in Virginia has provided the growth in licensed nurses. Virginia's supply of nurses comes from two primary sources, new graduates of Virginia's educational programs and nurses who move to Virginia and seek licensure by endorsement. If there are any changes in the number of nurses educated in Virginia (note the decline in LPNs decreased as LPN graduations declined), or if more nurses retire or move out of state in greater numbers then the number of licensed nurses will decline. These changes would exacerbate the nursing shortage.

**Figure 3: Growth of RN population and projected RNs need for Virginia:
1993 – 2009**



The projected RN number (107,798) needed in 2009 is based on the predicted job growth for RNs from the Labor Department.

- Current number of RNs in Virginia = 83,735 and RNs needed in 2009 = 107,798).
- ? Current number of RNs living in Virginia = 62,431 and LPNs living in Virginia = 23,249.
- By 2009 Virginia will need 24,063 new nurses to meet this projected demand.
- With the number of new nurses needed to replace retiring nurses is added, an additional 10,221 RNs are needed.

Source: Virginia Board of Nursing data for 1993 to 2001, VA Tech Survey and US Department of Labor

The aging nursing workforce

One of the most critical factors affecting the supply of professional nurses is the aging of the nursing workforce. Today, the average age of RNs, nationally, is 45.2 years of age. By 2010, more than 40 percent of the RN workforce will be over 50 years of age. Presently, only 31.7 percent of nurses are under 40 years old, this represents a decline of 20 percent in the last 20 years. The most alarming change is for nurses under 30 years of age, this group declined from 25 percent to 9 percent

between 1990 and 2000.⁷ The primary factor that has led to the aging RN workforce is that fewer young women have chosen nursing as a career during the last two decades. RNs in their forties outnumber the nurses in their twenties by a ratio of 4:1. This is a marked contrast from just twenty years ago when the ratio was reversed.

Beyond the challenges of replacing nurses as they retire, the advancing age of the workforce has major impact on the delivery of health care services. Older workers may be less able to perform the physically demanding and stressful job duties that are common in the nursing profession. As with any older worker, older nurses are more susceptible to neck, back and foot injuries and have a reduced capacity to perform certain physical tasks than younger nurses.⁸ The aging of the workforce is important to employers who must develop ways to restructure patient care delivery.

Employment settings for nurses

The major work settings for nurses are hospitals, long-term care (nursing homes and extended care) facilities, home health agencies, and ambulatory care settings. In 2000, the largest employer of RNs (59 percent) was hospitals (see Figure 4). Growth in new RN positions in hospital settings will be 7.9 percent, while growth in positions in home health agencies is expected to be 82.2 percent and growth in jobs in physicians offices by 44.5 percent during the next 10 years.⁹ The projected growth of

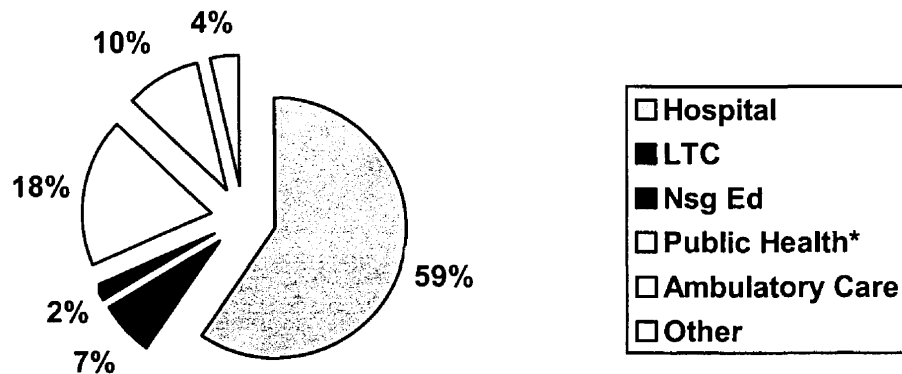
⁷ GAO Nursing Workforce: Recruitment and Retention of Nurses and Nurses Aides is a Growing Concern, May, 2001.

⁸Buerhaus et al. "Implications of an Aging Registered Nurse Workforce", JAMA Vol. 283. No. 22. June 14, 2000.

⁹ Bureau of Health Professions, HRSA, State Health Workforce, Virginia, December 2000.

jobs for RNs in long-term care will increase by 66 percent between 1991 and 2020 and for LPNs by 71 percent.¹⁰

Figure 4: Employment Settings of Registered Nurses



*includes occupational and school health

Source: National Sample Survey of Registered Nurses 2000

This growth continues the pattern of change seen in the last 10 years. Home health per capita employment in Virginia rose 459 percent between 1989-1998 in comparison to the national growth rate of 149 percent. An additional area of job growth for RNs during the last decade has been the health insurance industry and the related government agencies. Little data are available on the number and characteristics of nurses employed in these areas.

Hospitals employ fewer LPNs than RNs. Nationally RNs comprise 26 percent of the hospital workforce, compared to 6 percent for LPNs. The number of budgeted

¹⁰ Health Services Research and Evaluation, American Health Care Association, 2001.

positions for LPNs in Virginia hospitals is 2,419 in comparison to 21,091 budgeted positions for RNs. However, LPNs are employed in larger numbers in long-term care facilities, 11 percent, as compared to 9 percent for RNs.¹¹ Long-term care facilities in Virginia have reported shortages of RNs and LPNs. These work settings are impacted by shortages earlier in the cycle of shortages because of lower salaries, working conditions and the competition among health care employers for nurses.

The intensity of care required by patients in hospitals, in long-term care settings and home health settings is higher since patients are sicker and need more complex nursing care. A critical factor in the current nursing shortage is the higher proportion of patients having more complex care needs and growing complexity of the technology used in providing care. Health workplaces demand more highly skilled and technically proficient nurses to care for these sicker patients.

A 2000 study conducted by the Virginia Hospital and Health Care Association revealed that Virginia hospitals had 2,311 position vacancies, 83 percent were for staff RNs. The average tenure for RNs employed in Virginia hospitals is 6.6 years and for LPNs 8.6 years. The tenure in urban regions with more transient populations is shorter. In 1999, the average turnover rates in hospital employment for RN staff was 17.3 percent and LPN staff was 18.9 percent.¹² The combination of vacancies and turnover challenges hospitals and other health care facilities as they strive to provide quality care. Anecdotal reports indicate that the vacancy rates across the state are higher today than in 2000.

¹¹Ibid

¹² Brown, Barbara S. "Vital Signs: Status of Virginia's Hospital Workforce", 2000

Replacing a hospital nurse takes an average of three months. During this period hospitals use part time workers, repositioned staff, agency staff and travelers. Despite these efforts some hospital units are understaffed and hospitals across the state have closed beds because of inadequate nurse staffing. Another change that the VHHA reports is that new graduates are being recruited to positions that were only available to experienced nurses in the past.¹³

Bringing unemployed nurses back into the workforce is a solution that has been proposed. According to the 2000 National Sample Survey of Nurses, nationally, 81.7 percent of RNs currently registered are employed in nursing. Of that number 71.6 percent are employed full time. In Virginia, it is estimated that 75.8 percent of RNs currently licensed by the Virginia Board of Nursing are employed in nursing positions. This represents a decline of 3.6 percent from 1996 and is lower than the national average (see Figures 5 & 6).¹⁴ Nationally, half of the nurses not employed in nursing are over 60 years of age. Virginia does not have data about the work status and reasons for unemployment of nurses.

¹³ Ibid

¹⁴ National Sample Survey of Registered Nurses, Division of Nursing, Bureau of Health Professions, HRSA, 2000.

Figure 5: Nurses Employed in Virginia		
Year	Employed in Nursing	
1992	77.4%	
1996	79.4%	
2000	75.8%	
U. S. for 2000	81.7%	
Figure 6: Nurses Employed Full Time		
State	% Employed in Nursing	% Full-Time
VA	75.8%	73.2%
MD	88.1	69%
NC	83.2	80.8%
US	81.7	71.6

Source: National Sample Survey of Registered Nurses, Division of Nursing, BHP, HRSA

The Board of Nursing is conducting an analysis of a sample of Virginia nurses. Until this data analysis is available, the only information about the Virginia nursing workforce that is available is from the National Sample Survey of Registered Nurses. Licensed Practical Nurses are not included in this survey. The ability to describe the Virginia nursing workforce and propose strategies for drawing nurses back into the workforce is limited by this lack of information. Health care employers have increased their efforts to attract unemployed nurses back into the workforce but this is not a coordinated statewide or regional effort.

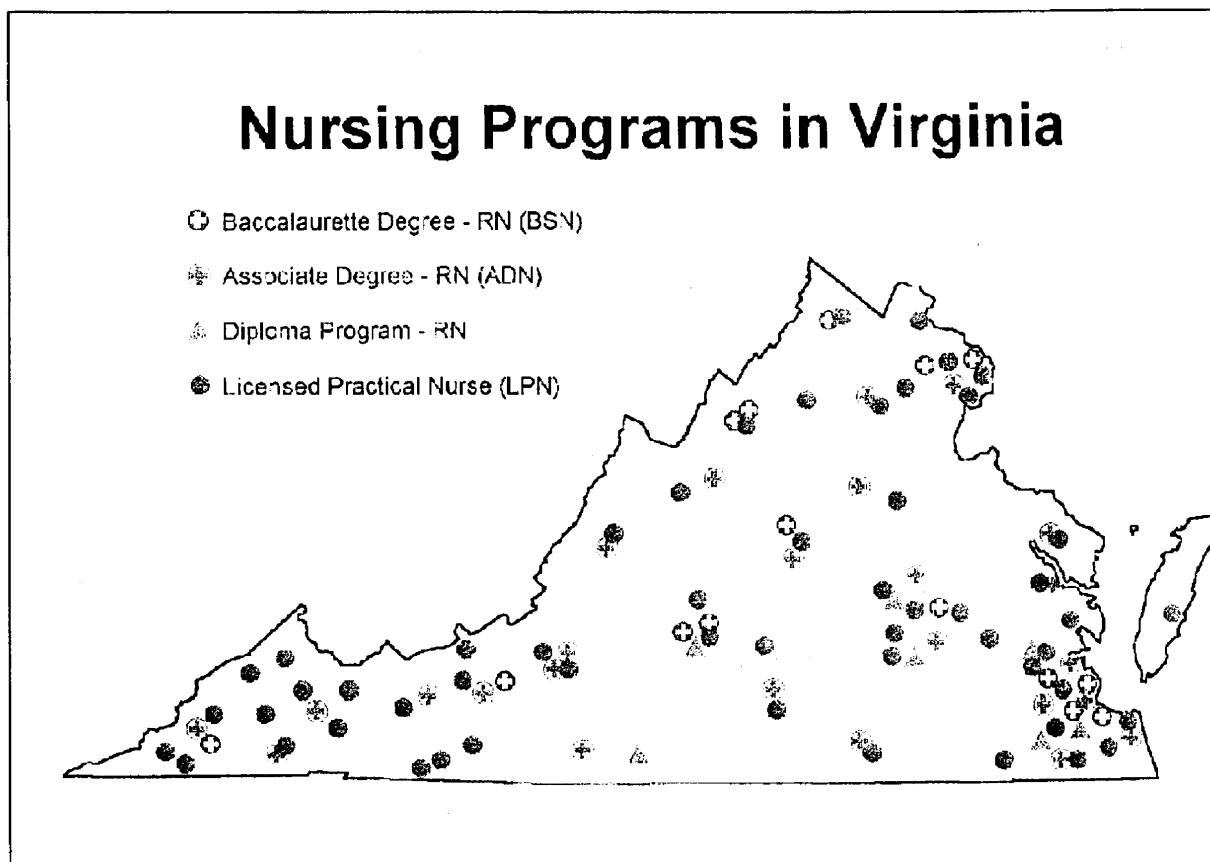
III. Nursing Education Programs in Virginia

Educational options for a nursing career

Individuals seeking a career as an RN may choose among the three types of programs: Associate Degree program offered in community colleges and selected Universities in Virginia, diploma program offered primarily by hospitals some in conjunction with higher education institutions, or baccalaureate programs. These programs vary from 2 to 4 years in length. LPN Programs are generally twelve to

eighteen months in length and based in public schools and community colleges (see Figure 7).

Figure 7: Nursing Programs in Virginia (see Appendix 3 for programs)



Advanced practice nurses are not specifically addressed in this report, except for the need for larger numbers of nursing faculty. Advanced Practice Nurses (Nurse Practitioners, Clinical Nurse Specialists, Nurse Midwives, Nurse Anesthetists and Nursing Faculty) have baccalaureate degrees and Master's degrees in an area of specialization. These nurses are included in the total numbers of RNs reported by the Board of Nursing. They are an increasingly important group within the nursing workforce. The changes in the health care system call for more nurses with advanced education. Shortages of obstetrical and anesthesia providers have been noted. The

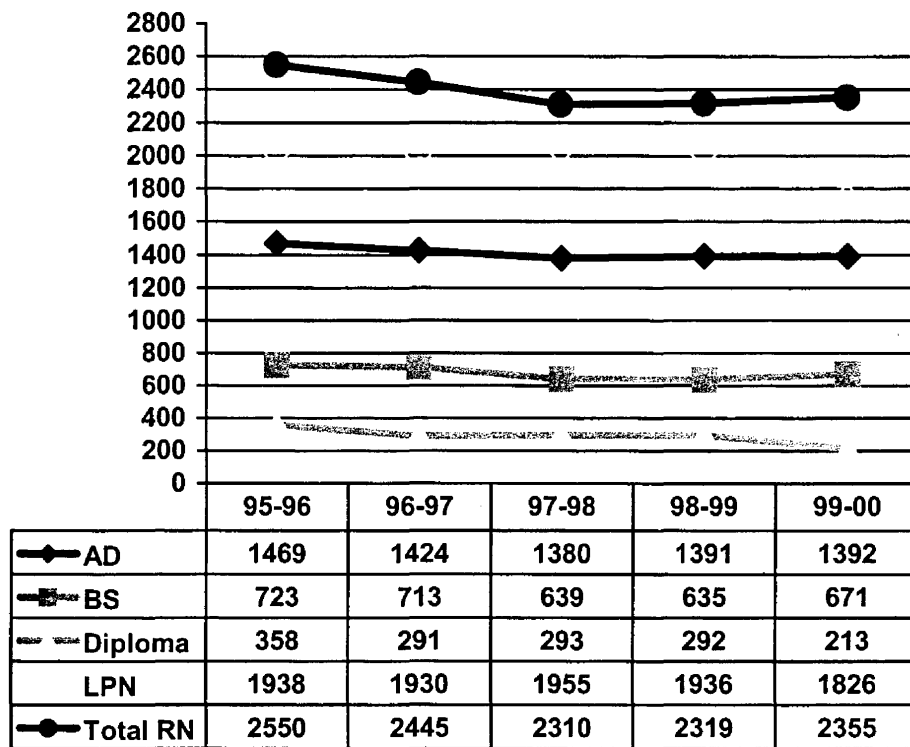
current numbers of certified nurse anesthetists, certified nurse midwives and women's health nurse practitioners are small. Increasing the numbers of these health care providers can assist the commonwealth in providing access to crucial health care services. Nurses with doctoral preparation are needed as faculty and to develop nursing and health care research that will improve the health of people across the Commonwealth. It is expected that nursing faculty members will retire in large numbers in the next decade. Preparing advanced practice nurses is essential to ensuring an adequate number of faculty for the Commonwealth's nursing education programs.

Admissions and graduations for Virginia's nursing programs

Virginia's educational institutions are spread across the Commonwealth and many offer distance-learning opportunities for students. Geography is not the major factor-limiting enrollment in nursing programs. Enrollment limitations are related to financial constraints in the educational institutions and for the students when scholarships and financial assistance are limited.

Virginia has 15 Baccalaureate (BS) degree programs preparing new nurses in state supported and private colleges across the state. In the 1999-2000 academic year, BS programs admitted 671 students and graduated 786 students (see Figures 8&9). One hundred twenty-two of the graduates were Licensed Practical Nurses who were advancing their education. (see Appendix B for a list of Virginia's Nursing Education Programs)

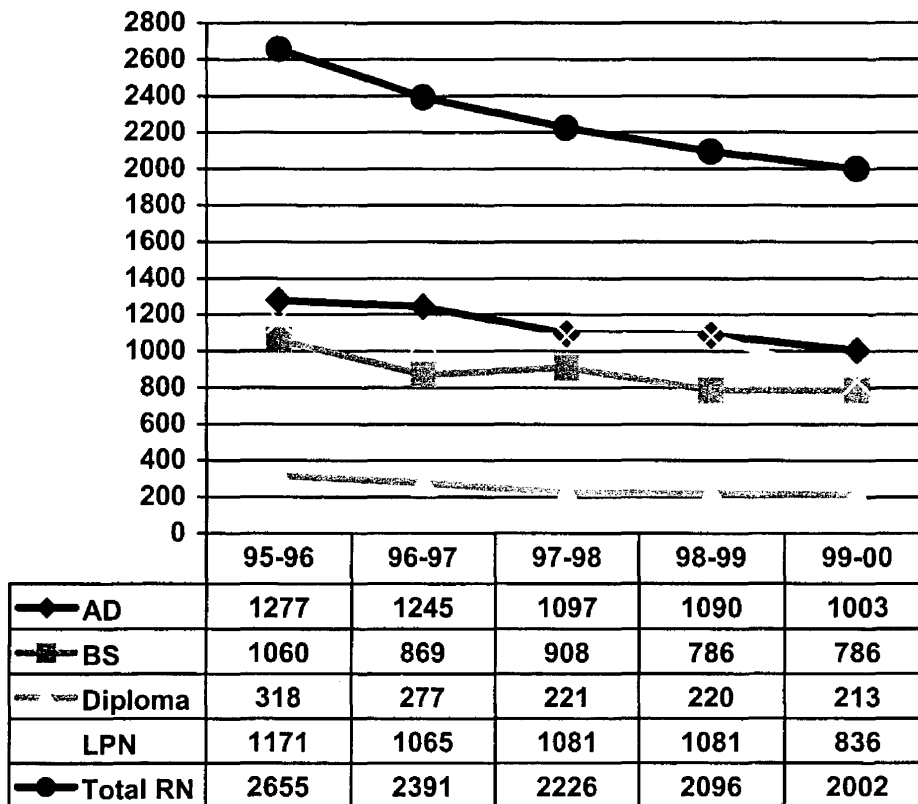
Figure 8: Admission to Nursing Programs 1995-1999



Source: Virginia Board of Nursing

The Commonwealth's 16 Associate Degree nursing education programs are housed primarily in community colleges but there are two in universities. The programs are spread across Virginia. In 1999-2000, programs admitted 1,392 students and had 1,003 graduates. A total of 191 graduates were LPNs who were furthering their education. Virginia has seven diploma nursing programs. In 1999-2000, these programs admitted 213 students and they graduated 213 students. A total of 26 of these graduates were LPNs (see Figures 8&9).

Figure 9: Graduations from Nursing Programs 1996-2000



Source: Virginia Board of Nursing

The change in the pattern of nursing education over the last twenty years has resulted in changes in the mix of educational preparation for registered nurses. There has been an increase in the number of registered nurses who are graduates of associate degree and baccalaureate degree programs. The number of graduates from diploma education programs has decreased as programs either closed or shifted to educational institutions. There are no comprehensive data on the educational levels of RNs practicing in Virginia.

Virginia's 52 LPN programs are based in high schools, community colleges and private schools. The high school extended programs consist of nursing course work

and clinical practice experience. The students in the LPN programs are both high school students and adults returning to school. Programs vary from 12-18 months in length. In 1999, 1,826 students were admitted to LPN programs and 837 completed LPN educational programs in 2000 (see Figures 8&9).

The National League of Nursing reports a decline in numbers of students graduating from all RN programs. Nationally between 1995-1999, there was an 18 percent decline in RN graduates.¹⁵ HRSA predicts that this declining trend may reverse in the next several years but the numbers are not anticipated to increase sufficiently to meet the demand. Changes must be made if educational institutions are to enroll the additional nursing students needed to meet the health care needs of the population.

Overall admission to Virginia's RN and LPN programs has declined by 5 to 15 percent over the last five years. All levels of programs have experienced declines in admissions. Graduations from RN programs have declined between 22 to 33 percent in this same five-year period. Reports from program directors indicate that attrition rates are higher for a variety of reasons. Students are older and have multiple responsibilities that cause them to drop out or slow their education and greater numbers of students have academic difficulty and cannot complete programs.

The same decline is noted for admissions (6 percent) and graduations (25 percent) for LPN programs. The reasons for the changes in LPN education are complex. In the early 1990s, it was predicted that there would be a decline in need for LPNs in the health care industry. Until recently, salaries for LPNs have been stagnant

¹⁵ National League for Nursing. Information available in the United States Workforce Personnel Fact book at <http://www.hrsa.gov/healthworkforce/factbook.htm>. Data from 1997 forward unpublished.

and there are reports that the career is not seen as an attractive, particularly to young adults. For high school students, the change in graduation requirements of the late 1990s made it more difficult for students to take all of the LPN courses and meet the graduation requirements. Adult students in LPN programs have difficulty in finding adequate financial aid to support their tuition and living expenses.

Survey of Nursing Education Programs

A survey of all of Virginia's RN and LPN programs was conducted in the summer and fall of 2001. Program directors reported on factors influencing their ability to increase program size, reasons for the increase in attrition rates, existing program flexibility and planned program changes. Questions about faculty ages and issues in faculty recruitment and retention were included. The Virginia Partnership for Nursing and Virginia Commonwealth University conducted the study.

Findings

Over half of the program directors reported that they could have enrolled additional students in 2001. Most of these programs were in private schools and LPN programs. Many directors indicate that full classes had been admitted but students were unable to enroll because of financial, family or work conflicts. A number of private colleges indicate that they are unable to fill classes because of program costs and limited financial aid available to students.

Many programs plan to increase enrollment for next year. Application numbers have been larger this year. Directors believe that the changing economy increased their applications this year. The programs that do not plan to increase enrollment cite

lack of qualified student applicants, lack of funding for faculty, lack of classroom space, equipment and clinical/laboratory space as the limiting factors.

How much of a problem is attrition to nursing programs?

Nursing programs educational levels have differing admission criteria that reflect the educational institutions mission. This affects the rate of attrition across program levels. Programs for LPNs and Associate Degree programs have more open admission standards than the programs in the four-year colleges. The result is that attrition in these nursing programs is higher than baccalaureate programs. The rate of attrition in programs is generally higher in the first nursing courses. Many programs admit more than once per year to assure full classes in the upper level courses. Other programs report accepting larger classes to assure that their advanced courses are full and that the graduation numbers do not decline.

The attrition rates vary across programs and from year to year. Some LPN programs report an attrition rate that is higher for high school students than for adult students. LPN programs report attrition rates of 10-75 percent, with a median rate of 50 percent. The attrition rate from Associate Degree and Diploma programs range from 20-50 percent. The attrition rate for BS programs is 4-25 percent.

Little is known about the cultural diversity of the students in Virginia's nursing programs. Many programs do not collect demographic data on applicants, other than gender. For programs reporting data between 50 and 100 percent of minority students are admitted. The attrition rates of minority students range from 35 and 65 percent. Minority student attrition is somewhat higher than the attrition rates for non-minority students in almost all programs.

Nursing Educators

The success of each nursing program is dependent on an adequate number of well-prepared faculty. Today, Virginia nursing programs can fill their faculty vacancies but report increasing difficulty in hiring senior level faculty. Retaining faculty is difficult because salaries are not competitive with clinical practice salaries. The survey revealed that urban associate degree programs have greater difficulty hiring and retaining faculty because of the wide gap in salaries between teaching and clinical practice. Baccalaureate degree programs report difficulty in hiring PhD prepared faculty who can engage in research as well as teach and provide service.

Workload is a significant issue across all programs. Patients are more acutely ill while hospitalized and the responsibility of faculty for patient safety and student learning is more difficult. The Board of Nursing requires that the faculty to student ratio in clinical courses be no more than a 1:10 to assure safe education and patient care. This is not the ratio that educational institutions use for faculty to student ratios in courses. This discrepancy in funding presents a challenge for the nursing programs.

As with every other sector of the nursing workforce, the aging of nursing educators is a significant factor that impacts nursing education. National reports on faculty age indicate that faculty members are on average 10 years older than the average nurse. The impact of the aging faculty is that schools of nursing could be facing a dramatic loss of experienced faculty as they increase enrollments to reduce the nursing shortage. Half of all faculty teaching in nursing programs are over 50 years of age (Figure 10).

FIGURE 10: PERCENT OF FULL TIME FACULTY BY AGE					
Program Type	20s	30s	40s	50s	60s
Baccalaureate and higher degree	>1	6	40	43	11
Associate Degree	<1	17	39	38	5
Diploma	7	7	14	67	5
Licensed Practical Nurse 106	<1	20	39	31	9
Total Percent	2	13	35	42	8

Directors report that faculty members leave their positions primarily for reasons related to salary and workload. Faculty prepared at the PhD level leave because they are recruited to other institutions. There are few doctoral prepared nurses and recruitment for these research prepared faculty is intense. Retaining experienced faculty is a problem across all program levels. Faculty salaries have always lagged behind salaries in clinical practice. Today, a faculty member may be able to double a salary by moving to a clinical practice position.

Salary policies vary across the levels of nursing programs. LPN program faculty in K-12 schools may not receive the same salary and benefits as classroom teachers despite their comparable educational preparation, experience and responsibilities. Community colleges have a formula for teaching hours that has higher contact hours for nursing and other laboratory faculty than for classroom faculty. The result is a heavier workload for faculty assigned to clinical nursing courses. Directors across all program levels report that the salaries available for part time faculty are lower than the salaries that the nurse is paid in clinical practice. This limits the ability to employ qualified faculty in part time positions.

Educational program changes

Most of Virginia's nursing programs have made changes to increase program flexibility. For example, AD programs report providing advanced standing for LPNs

and, in some programs, for Certified Nurse Aides. Many LPN programs have increased clinical hours and course content, particular in the Medical-Surgical nursing, and grant advance placement for Certified Nursing Aides. All BS programs offer advanced standing to graduates of AD and Diploma Programs and some offer advanced standing for LPNs. Many programs offer alternative schedules to accommodate students who are employed. These include evening and weekend programs and distance learning formats. Some of the programs are limited by the classroom, clinical/laboratory and instructional technology available to them. Others report that program expansion is limited by not having additional faculty positions and low faculty salaries.

What can the Commonwealth do to increase nursing enrollment?

Increasing the supply of nurses educated in Virginia is an essential component in reducing the nursing shortage. Program directors propose short and long term solutions. Development and implementation of a statewide recruitment plan should be done immediately. The AHEC in collaboration with education, nursing and health care organizations should be funded to implement this plan. In addition, recommendations include increasing funding for scholarship and loan repayment programs; increasing funding particularly for adult students entering LPN programs; increasing funding to support faculty salaries and curriculum reassessment that addresses faculty funding ratios; and a review of the LPN courses and their place in the high school graduation requirements. The current Mary Marshall Nursing Scholarship Program has \$100,000 in general funds for RN (in all program types) and LPN scholarships. In addition, nurses contribute \$1.00 with their licensure fees to expand the scholarship fund. The

awards range between \$200 and \$2,000. There is \$25,000 in general funds available for Nursing Practitioner and Nurse Midwife scholarships. These awards are generally for \$5,000. The long-term care scholarship program was created by the General Assembly but not funded. Each year, there are more applicants for scholarships than funding available. The lack of financial aid is a problem for students across all program levels.

Virginia's nursing education programs are spread across the Commonwealth, providing citizens access to nursing education throughout Virginia. Although Virginia ranks in the bottom 40 percent of states for RNs per population the Commonwealth is above the mean for nursing programs per population. Increasing the number of nurses educated is essential to assuring an adequate supply of nurses. The policy options proposed increase the number of nurses practicing in Virginia by enhancing and expanding current nursing programs.

The initial phase of 10 percent growth can be accomplished in most programs by adding faculty and equipment. Doubling the size of nursing programs is needed if Virginia is to approximating the number of nurses needed to provide care to Virginia's citizens. Programs that double in size will need funding for expansion of physical facilities and laboratories as well as equipment and funding for faculty salaries. The State Council on Higher Education, in collaboration with the institutions of higher education, should prepare the plan for nursing program expansion.

IV. Policy options

The recommendations are presented in three categories:

- Increasing the number of nurses in Virginia through coordinated recruitment;

- Expanding the capacity of nursing education programs;
- Broader policy options to reduce the shortage of nurses.

Recruitment of nurses:

- I. Request the JCHC to submit a budget amendment to provide funding to the AHEC Statewide (§ 32.1-122.7.) to develop and implement a comprehensive nursing recruitment plan for the Commonwealth. The plan is to be developed in collaboration with the Virginia's nursing education programs, Virginia Partnership for Nursing, the Virginia Hospital and Healthcare Association and the Virginia Health Care Foundation.
- II. Submit a budget amendment to fund the Advisory Council on the Future of Nursing. (§ 9-396.).

Education of nurses:

- III. Request the JCHC to submit budget amendments to increase the size of enrollment in nursing education programs to reduce the nursing shortage.
- IV. Draft legislation requesting the State Council on Higher Education to develop a plan to expand access to nursing education programs for LPN, and Associate and Baccalaureate degree programs by up to 100 percent increase in size. This report should be presented to the Joint Commission on Health in Fall 2002 as a part of the continuation of this study. (§ 23-9.10:1.)

Education financing:

- v. Fund the long-term care scholarship program. (§ 32.1-122.6:01.)
- VI. Double the funding for the Mary Marshall Scholarship Program for RNs and LPNs to \$200,000. (§ 32.1-122.6:01.)
- VII. Establish a part time scholarship program for RNs and LPNs.

- VIII. Establish a nursing faculty scholarships/loan program to prepare the new faculty who are needed for current programs and for expansion.
- IX. Request SCHEV to study and recommend changes in the nursing faculty salaries as compared to clinical practice salaries and workload. This should be a component of the report to the JCHC in Fall 2002. (§ 23-9.10:1).

Planning and policy development:

- X. Submit a budget amendment to fully fund the data collection from RNs, LPNs and CNAs collected by the Board of Nursing.
- XI. Increase funding to the Virginia Department of Health for the health workforce planning and regulation to address the current and future shortages of nurses in the Commonwealth. (§ 32.1-122.8).

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Appendix A:

HOUSE JOINT RESOLUTION NO. 664

Offered January 10, 2001

Requesting the Virginia Partnership for Nursing, in cooperation with various state agencies and other nursing and health care organizations, to conduct a study of education programs for registered nurses and licensed practical nurses in Virginia.

Patrons-- Bryant, Brink and Morgan; Senator: Bolling

Referred to Committee on Rules

WHEREAS, the Virginia Joint Commission on Health Care (JCHC) conducted a study of strategies to educate, train, recruit, and retain nurses pursuant to House Joint Resolution 288 and Senate Joint Resolution 228 of the 2000 Session of the General Assembly; and

WHEREAS, hospitals, long-term care facilities, home health providers, and physician offices report having serious difficulties recruiting, hiring, and retaining qualified nurses; and

WHEREAS, the JCHC concluded that the hiring difficulties of health care employers will worsen in light of the fact that many researchers are projecting a significant shortage of nurses by 2008; and

WHEREAS, there are several factors believed to be driving the projected shortage, including: (i) expanded employment opportunities for women; (ii) increasing work pressures; (iii) decreasing nursing school enrollments and graduations; and (iv) an insufficient number of younger nurses entering the profession to replace those who will be retiring beginning in 2008; and

WHEREAS, admissions to education programs for registered nurses in Virginia have decreased 25 percent since 1993, and graduations have declined 20 percent since 1997; and

WHEREAS, admissions and graduations at Virginia's education programs for licensed practical nurses also have declined in recent years; and

WHEREAS, the Virginia Employment Commission projects 19 percent employment growth for registered nurses and 25 percent employment growth for licensed practical nurses between 1996 and 2006; and

WHEREAS, it is critical to increase the number of qualified persons enrolling in and graduating from Virginia's nursing education programs in order to avert a critical shortage of nurses in the future; and

WHEREAS, further study is needed to determine what actions must be taken to ensure that Virginia's nursing education programs not only enroll and graduate more nurses but also provide nurses with the necessary skills and training to meet the increasingly acute level of care required by patients; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Virginia Partnership for Nursing, in cooperation with the Virginia Nurses Association, the Virginia League for Nursing, the Virginia Association of Colleges of Nursing, the Virginia Council of Associate Degree Nurse Program Heads, the Virginia Health Occupations Education Association, the Assembly of Hospital Schools of Nursing in Virginia, the Virginia Organization of Nurse Executives, the Virginia Hospital and Healthcare Association, the Virginia Health Care Association, the Virginia Association of Nonprofit Homes for the Aging, the Virginia Association for Home Care, the State Council of Higher Education for Virginia, the Virginia Board of Nursing, and other appropriate entities, conduct a study of nursing education programs for registered nurses (RN) and licensed practical nurses (LPN) in Virginia.

The study shall include, but need not be limited to, an analysis of: (i) actions that are needed to increase the number of persons enrolling in and graduating from Virginia's RN and LPN nursing education programs; (ii) whether the capacity of Virginia's RN and LPN nursing education programs needs to be increased to meet future demands; (iii) actions that are needed to recruit and retain more nursing faculty; (iv) whether curriculum changes are needed to ensure that RN and LPN nursing education programs will meet future nurse workforce demands; (v) whether there needs to be a greater or lesser emphasis placed on certain types of RN degree programs; and (vi) other appropriate issues related to RN and LPN nursing education.

The Virginia Partnership for Nursing is requested to submit its findings and recommendations to the Joint Commission on Health Care by October 15, 2001, and to the Governor and the 2002 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Appendix B: Nursing Programs in Virginia in 2001

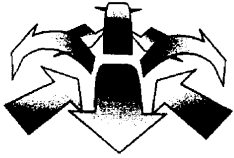
Associate Degree Programs – RN
Blue Ridge
Community Hospital Roanoke Valley College of Health Sciences
Dabney S. Lancaster
Germanna
J. Sargeant Reynolds
John Tyler
Lord Fairfax
Marymount University
Norfolk State University
Northern Virginia
Patrick Henry
Piedmont Virginia
Southside Virginia
Thomas Nelson
Tidewater
Virginia Appalachian Tri-College (VA Highlands, SWVA, Mountain Empire)
Virginia Western
Wytheville

Diploma Programs – RN
Bon Secours Memorial (Richmond)
Danville Regional (Danville)
Lynchburg General (Lynchburg)
Louise Obici (Norfolk)
Riverside School of Professional Nursing (Newport News)
Sentara Norfolk General (Norfolk)
Southside Regional Medical Center (Petersburg)

Baccalaureate Degree Programs – RN
Christopher Newport University (Newport News)
College of Health Sciences (Roanoke) RNs only
Eastern Mennonite University (Harrisonburg)
George Mason University (Fairfax)
Hampton University (Hampton)
James Madison University (Harrisonburg)
Liberty University (Lynchburg)
Lynchburg College (Lynchburg)
Marymount University (Arlington)
Norfolk State University (Norfolk)
Old Dominion University (Norfolk)
Radford University (Radford)
Shenandoah University (Winchester)
University of Virginia (Charlottesville)
University of Virginia at Wise (Wise) RNs only
Virginia Commonwealth University (Richmond)

Licensed Practical Nursing Programs – LPN
Alexandria City Schools/ Alexandria Hospital
Amherst County Public School
Bedford County Schools/Memorial Hospital
Buchanan County Public School
Carilion Roanoke Memorial Hospital
Centra Health
Central School
Chesapeake Center for Science & Technology
Chesterfield County Public Schools
Dabney S. Lancaster Community College
Danville Community College
Fairfax County Public Schools (TC Williams)
Fredericksburg Area Schools Germanna Community College
George Washington Carver-Piedmont Technical Education Center
Giles County Vocational School
Henrico County Public School - St. Mary's Hospital
Henry County Public Schools- Memorial Hospital
Lafayette School
Lee County Vocational/Technical School
Lord Fairfax Community College
Loudon County Public Schools
Massanutten Technical Center
Medical Careers Institute

Licensed Practical Nursing Programs – LPN
New Horizons Technical Center-Peninsula Center
New River Community College
Newport News Public Schools Riverside Regional Medical Center
Page County Technical Center
Petersburg Public Schools/Southside Regional Medical Center
Portsmouth Public Schools
Prince William County Schools
Radford City Schools
Rappahannock Community College
Richmond Public Schools
Richmond School of Health & Technology
Russell County Vocational School
Scott County Vocational Center
Shore Memorial Hospital
Smyth County Public Schools
South Hampton Memorial Hospital
Southside Virginia Community College-Prince Edward County Schools
Southside Virginia Community College-Christanna Campus
Southside VA Community College- John H. Daniel Complex
Stonewall Jackson Hospital
Suffolk Public Schools/Obici Memorial Hosp
Tazewell County Career & Technical Center
Tidewater Tech
Twin County/Wytheville Community College
Valley Vocational Technical Center
VA Beach School of Practical Nursing
VA Western Community College-Salem High School
Washington County Public Schools
Wise County Vocational/Technical School



Virginia Partnership for Nursing

"Building the commitment and capacity to transform health care, by creating a nursing workforce responsive to consumer health care needs."

Appendix C: VPN – The Virginia Partnership for Nursing

Will a nurse be there when you need one? The rapidly aging nursing workforce combined with decline in enrollment in nursing education programs and the growth in nursing employment opportunities makes this a real and worrisome question. Employers of nurses across Virginia report increasing difficulty in filling nursing positions.

The VA Partnership for Nursing was created in late 1999 to serve as a catalyst in planning the future of nursing in Virginia. Steering Committee is forming and will be composed of nursing, health care, business and political leaders, as well as consumers of health care. This Partnership goals are to: (1) work for an appropriately prepared nursing workforce to meet the health needs of Virginians (2) analyze nursing supply and demand in Virginia and develop a nursing workforce forecasting model; (3) lead the development of educational change focusing on models that assure educational mobility for nurses; (4) reduce barriers and enhancing access to nursing education programs; (5) increase collaboration between nursing employers and educators to insure a competent workforce in a rapidly changing health care system; and (6) develop public policy that fosters the health of Virginia's citizens.

Nurses play a key role in planning and providing quality, cost-effective care. Nurses diagnose and treat a individual's response to health or illness, provide health education and health promotion, work in all health care settings and have considerable impact on preventing avoidable adverse events such as infections, drug and treatment complications. Virginians are at risk when an inadequate supply of nurses with the needed sophisticated skills is available to care for them.

In 2000, the Partnership developed the report on sources of nursing data for Virginia, supported the study of the demand for nursing in hospitals and nursing homes by the VA Hospital and Health Care Association, worked with the Board of Nursing to finalize the nursing data collection, planned the Spring 2001 Leadership Summit that will develop the plan for collaboration for changes needed to assure the 21st century nursing workforce. The VA Partnership works with Virginia business and government to plan the nursing workforce to assure that the health needs of Virginian's will be met in the future.

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