

The Health Care Workforce Shortage:


Executive Summary

Prepared for the Northern Virginia Health Care Workforce Alliance



Prepared for the
Northern Virginia Health Care
Workforce Alliance

www.NOVAHealthforce.com

PRICEWATERHOUSECOOPERS 

An Analysis of the Scope

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The Northern Virginia Health Care Workforce Alliance (NVHCWA) is a Coalition of business, academic and community leaders established to address the Northern Virginia health care workforce shortage. The mission of the Coalition is to:

“Establish a long-term, business-driven, sustainable strategy to address the Northern Virginia health care workforce shortage.”



The Health Care Workforce Shortage

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Introduction

The Coalition engaged PricewaterhouseCoopers to conduct a study of the issues and analyze the scope and impact of the health care workforce shortage on Northern Virginia — current and future in February 2004. Most of the employee occupations included in the study involve direct patient care.

Objectives

The objectives of the study are to identify:

- » current and future Northern Virginia health care workforce needs for 24 selected health care job categories
- » current and future gaps in the health care workforce and the driving forces leading to these gaps
- » training and education, recruitment, and retention best practices within Northern Virginia and other regions of the country.

Approach

The study approach included:

- » a quantifiable independent survey of a sample of health care providers in Northern Virginia
- » interviews with local health care providers, academic institutions and economic development authorities
- » a literature search.



Key Findings

Key findings from the study follow. Further detail is provided in the subsequent pages of the Executive Summary.

- » A shortage of health care workers exists in Northern Virginia. Health care providers in Northern Virginia are having difficulty in recruiting quality health care professionals. There is an estimated shortage of about 2,800 professionals in the 24 job categories studied -- an average vacancy rate of about 10 percent. This vacancy rate, without interventions, is anticipated to grow to over 41 percent by 2020 for the 24 job categories studied.
- » The anticipated vacancy percentages are estimated to range from 27 to 56 percent depending on the specific health care profession.
- » Registered nurse positions dominate the current and projected shortage, with more than 1,000 current vacancies. Shortages in other professions, however, are significant.
- » The forecasted growth will continue to put immense strain on the availability of health care workers through 2020. The Northern Virginia shortage is projected to increase to 16,600 vacant positions by 2020 without additional interventions. This is an increase of 13,800 vacant positions from current estimates of 2,800 vacant positions over the next 16 years – or about a 490 percent increase in vacancies.
- » Key drivers of the shortage are:
 - Significant population growth - the population is expected to grow over 33% by 2020, a significant rate and over twice that of the United States growth rate.
 - Increased demand for health care services because of the aging population
 - Concurrent aging health care workforce and the resultant retirements
 - Shortage of nursing and allied health profession faculty, schools, and clinical experience sites and the inability to find replacements
 - Concurrent aging of clinical faculty and the resultant retirements
 - Difficulties with having market competitive salaries for clinical faculty
 - Constant levels of graduates
 - Nature of the profession, i.e., 24 hours a day, seven days a week, high stress, heavy lifting, etc.
 - Low unemployment rates and high cost of living
- » The Northern Virginia health care providers are employing best practices to attract and maintain a strong workforce by:
 - creating awareness of the professions
 - providing specialized training and on-site training
 - focusing on retention and job satisfaction
- » Access to health care, quality of care, and quality of life may be negatively affected as a result of the shortages according to a number of national studies.



- » Shortages exacerbate turnover as workers burn out, look for higher wages and better work life balance. Interviews indicated that turnover rates were 10 to 20% in hospitals and higher in long-term care settings. This constant erosion of the workforce makes it difficult, if not impossible, to resolve the vacancies.
- » Northern Virginia needs to adopt innovative ways to minimize the growing health care workforce shortage. Types of programs include:
 - The development of innovative ways to provide health care services that use information technology advances, such as bioinformatics, computerized medical information including medical records, clinical informatics, and automated archival of medical images. Northern Virginia is characterized with strong, innovative health care providers; a robust and mature information technology industry; and cutting edge research. These attributes make it a natural setting to be a leader at the intersection of information technology and health care.
 - Best practices for recruitment and retention need to be expanded. These practices need to encourage creative and innovative ways to provide health care services.
 - Synergies among the health care providers, the educational institutions, and the economic development authorities and workforce planning commissions need to be more fully developed.





A Significant Shortage Of Health Care Workers Exists In Northern Virginia

The health care providers in Northern Virginia are facing shortages in key direct patient care positions. An estimated 2,800 FTE vacancies out of an estimated 23,500 employed FTEs exist in the 24 health care occupations studied. The vacancies are primarily

in nursing, medical records and health information technicians, and imaging. Other positions have significant vacancies especially on a percentage basis. The importance of these positions, although lower total demand, should not be understated.

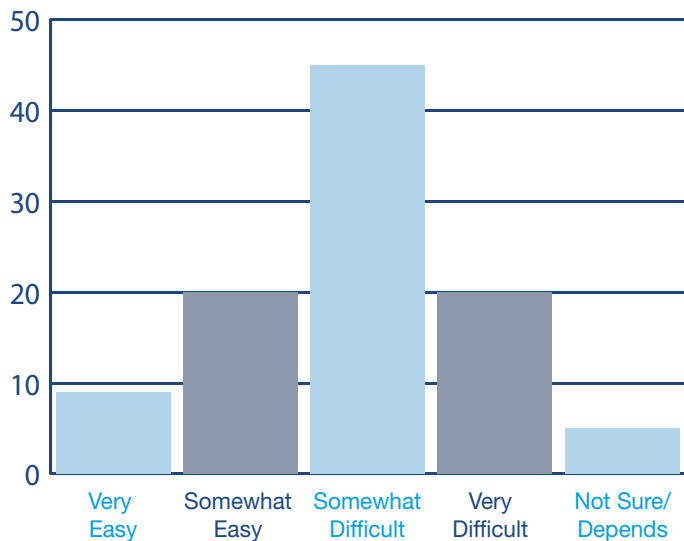
Demand for Health Care Professions – Employment, Vacancies and Vacancy Rates by Occupation

Occupation Title	Employment Estimate (FTEs)	Budgeted Vacancy Estimate	Vacancy Rate (%)
Registered Nurses (including CRNAs, Nurse Practitioners, and Nurse Midwives)	9,082	1,038	10.3%
Licensed Practical Nurses	1,111	390	26.0%
Nursing Aides, Orderlies, Certified Nurse Assistants, Attendants	3,245	323	9.1%
Medical Records and Health Info Technicians	1,337	172	11.4%
Physical Therapists	573	119	17.2%
Radiologic Technologists and Technicians	723	109	13.1%
Physical Therapist Assistant	255	91	26.3%
Medical and Nurse Managers	1,054	76	6.7%
Occupational Therapists	350	67	16.0%
Speech Language Pathologists	122	46	27.4%
Home Health Aides	1,080	40	3.6%
Respiratory Therapists	233	39	14.2%
Medical and Clinical Lab Technicians	228	32	12.3%
Medical and Clinical Lab Technologist	397	30	6.9%
Dental Hygienists	750	30	3.8%
Pharmacists*	139	24	14.6%
CT Scanning Technologist	237	24	9.2%
MRI Technologists	172	22	11.4%
Surgical Technologists	134	21	13.4%
Dental Assistant	1,110	20	1.8%
Emergency Medical Technician/Paramedic	864	19	2.1%
Pharmacy Technicians*	149	16	9.4%
Phlebotomist	156	15	8.8%
Surgical Technician	33	0	0.0%
Total	23,534	2,763	10.5%
*non-retail			



Sixty-five percent of the Northern Virginia Health Care Workforce Survey respondents characterized recruitment as somewhat difficult or very difficult.

Most Health Care Providers Find Recruiting Difficult



The nature of the occupations in this study makes these types of vacancy rates difficult to effectively manage. This is complicated by the need to function 24 hours, 7 days a week, operate within mandated nurse-to-patient ratios, maintain direct patient interaction, and staff for current workload, i.e., workload that cannot be deferred to another day, etc. The majority of the high vacancy positions are highly skilled, requiring advanced education and/or licensure/certification and making them difficult to readily replace and requiring further specialized education.

The study found that health care managers have functioned with these vacancies by adopting strong human resource techniques including:

- » Market-based compensation
- » Overtime
- » Better than regional benefits
- » Flexible scheduling
- » Agency labor
- » Magnet Recognition for Excellence in Nursing Services from the American Nurses Credentialing Center (ANCC)

Using these techniques, the Northern Virginia health care industry has been able to provide high quality care, including meeting minimum staffing requirements without significant diversions, surgery cancellations, etc. This, however, has forced the health care providers to experience increases in the cost of doing business. According to the Center for Health System Change of the Robert Wood Johnson Foundation: 2001 payroll costs were significantly higher compared to the same period in 2000, rising 7 percent for all health services and 7.6 percent for hospitals.



Registered Nurses Dominate the Current and Projected Shortage, With Over 1,000 Current Vacancies

Registered nurses currently are experiencing the highest shortage in terms of magnitude, with more than 1,000 budgeted vacancies reported. These findings correlate to the well-publicized shortage of registered nurses for the past several years. The potential passage of nurse staffing ratios threatens to drive the shortage even higher should it not be addressed with supply side solutions. Adding to the problem is the increased acuity of the average patient requiring more and more specialization among nurses and the expansion of health care delivery settings.

The Bureau of Labor Statistics reports that registered nurses will grow faster than the average of all occupations and given its current size, this growth will result in a tremendous amount of new jobs. Long-term care facilities and hospitals are experiencing the largest shortage of registered nurses in Northern

Virginia reporting vacancy rates of 14.4% and 10.7% respectively. Low wages, hours and schedules, hard work and stressful environments have likely limited their short-term ability to compete with outpatient clinics and home health agencies which may offer higher wages and provide a more flexible work environment.

**“The Bureau of
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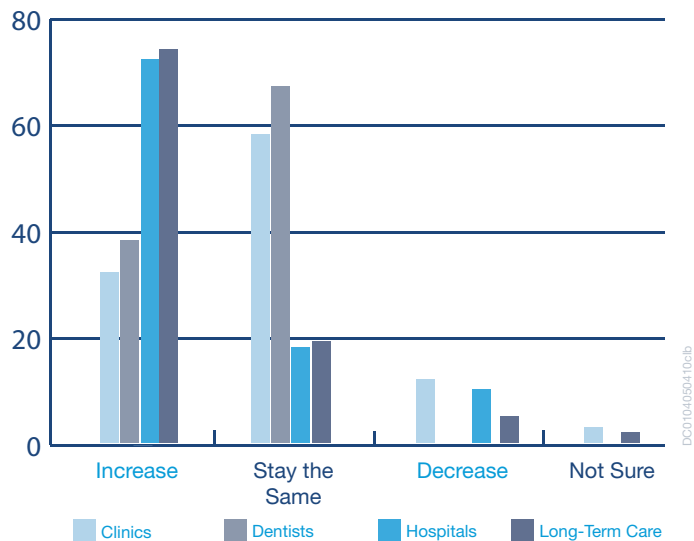




The Current Health Care Workforce Shortage Is Likely To Get Much Worse

Health care providers in Northern Virginia are increasing their staffs. Nearly half of the organizations surveyed are planning to increase their workforce in the next 12 months.

Percent of Health Care Providers, by Type, Planning to Increase Their Staffs



Estimated Demand for Health Care Workers in the Future is Significant

The demand for health care workers through 2020 is expected to significantly increase due to a combination of factors. This will add to the already significant level of vacancies in the health care workforce. The estimated gap based on the study parameters through 2020 is about 16,600 workers. These workers all require a certain amount of specialized training as well as a strong foundation in math and science. English as a Second Language (ESL) becomes important as New Americans are targeted.

The estimated demand for health care workers in 2010 and 2020 is noted on the chart on the following page.



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Estimated Demand for Health Care Workers through 2020

Occupation Title	Current Employment	Current Shortage	Current Demand	Projected Health Care Workforce Needs by 2010	Projected Health Care Workforce Needs by 2020	Percent Shortage in Workforce by 2020
Registered nurses (including CRNAs, nurse practitioners, and nurse midwives)	9,082	1,038	10,120	12,056	15,432	41.1%
Nursing aides, orderlies, certified nurse assistants, attendants	3,245	323	3,568	4,251	5,441	40.4%
Medical records and health info technicians	1,337	172	1,509	1,872	2,547	47.5%
Dental assistants	1,110	20	1,130	1,402	1,906	41.8%
Medical and nurse managers	1,054	76	1,130	1,345	1,722	38.8%
Home health aides	1,080	40	1,120	1,334	1,708	36.8%
Dental hygienists	750	30	780	967	1,316	43.0%
Emergency medical technician/paramedics	864	19	883	1,052	1,347	35.9%
Radiologic technologists and technicians	723	109	832	991	1,268	43.0%
Licensed practical nurses	1,111	390	1,501	1,669	1,919	42.1%
Physical therapists	573	119	692	825	1,056	45.7%
Physical therapist assistants	255	91	346	430	584	56.3%
Occupational therapists	350	67	417	496	635	44.9%
Respiratory therapists	233	39	272	324	415	43.9%
CT scanning technologists	237	24	261	312	399	40.6%
Medical and clinical lab technologists	397	30	427	474	545	27.2%
MRI technologists	172	22	194	232	296	41.9%
Speech language pathologists	122	46	168	200	256	52.3%
Pharmacy technicians	149	16	165	196	251	40.6%
Pharmacists	139	24	163	194	249	44.2%
Surgical technologists	134	21	155	184	236	43.2%
Medical and clinical lab technicians	228	32	260	289	332	31.3%
Phlebotomists	156	15	171	190	218	28.4%
Surgical technicians	33	-	33	40	51	35.3%
Grand Total	23,534	2,763	26,297	31,325	40,129	41.4%
Projected Health Care Workforce Vacancies from Current Employment Estimates				7,791	16,595	



The registered nurse gap is estimated to be about 6,350 by the year 2020, assuming no increases in the annual number of graduates from regional educational institutions. This number of RNs requires an addition of about 400 nurses each year over and above the current loss rate due to change in careers or retirements. The shortage is likely to be exacerbated because many of these professions are characterized with an aging population themselves. The average age of an RN in the Commonwealth of Virginia is over 45 years. Therefore, as the demand increases, nurses and other professionals will begin to retire or need to be employed in a less physical demanding job.



“The registered nurse gap is estimated to be about 6,350 by the year 2020.”



Population Growth And Aging Population Are Key Drivers

Population growth and aging population are key drivers of the health care workforce shortage in Northern Virginia – which are anticipated to continue through 2020.

Northern Virginia’s population is expected to grow over 33 percent by 2020. This compares to an estimated United States growth rate of 16.5 percent. Loudoun County, which is projected to almost double by 2020, was the fastest growing county in the nation in 2003.

An estimated population of 2.7 million people in Northern Virginia by the year 2020 will significantly increase the need for health care employees. This increasing demand is further supported by the number of health care institutions that are making significant capital investments in their facilities. An estimated \$850 million of improvements is in varying stages of planning, approval, and construction. Other key attributes of the region and population affecting the demand for health care workers:

Population Growth Projections in Study Region

	2004	2010	2020	Projected Growth (2004-2020)	Growth in % (2004-2020)
Arlington County	197,858	214,177	244,421	46,562	23.5%
Fairfax County	1,013,924	1,113,851	1,273,924	246,293	24.0%
Loudoun County	217,056	283,799	416,247	190,716	84.6%
Prince William County	326,480	368,031	449,362	122,882	37.6%
City of Alexandria	139,725	153,889	180,757	41,032	29.4%
City of Fairfax	22,862	23,050	23,367	505	2.2%
City of Falls Church	11,288	12,197	13,877	2,589	22.9%
City of Manassas	38,156	46,230	53,232	15,077	39.5%
City of Manassas Park	12,476	14,378	18,215	5,738	46.0%
Combined Northern Virginia	2,002,008	2,226,602	2,673,401	671,393	33.5%
US					16.5%

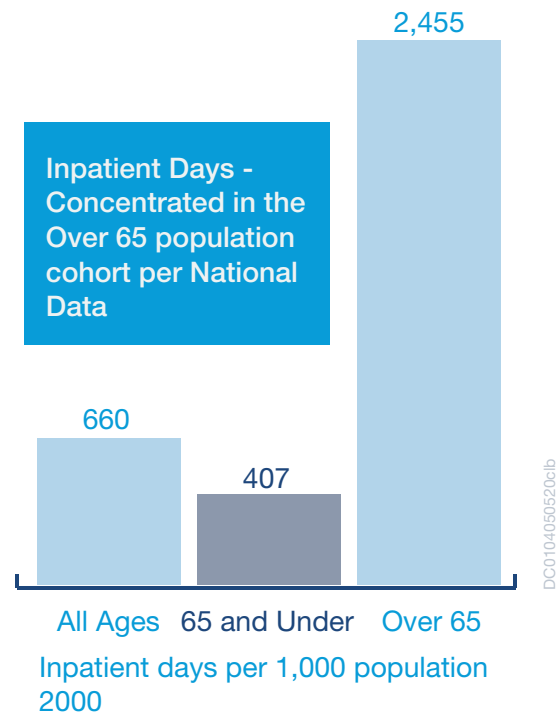
Source: April 1, 2000 Census, July 1, 2001 Estimate, July 1, 2002 Estimate and Provisional 2003 based on Census figures as provided by the Weldon Cooper Center, University of Virginia, February 2, 2004. Projections developed by calculating the compound annual growth rate between the estimated 2002 and projected 2007 population by ethnicity data provided by Solucient. Using the July 1, 2002 estimate data as a base year 2003 through 2020 were projected by applying the compound annual growth rate to calculate the growth estimate.



- » The Northern Virginia population is aging. The over-65 population in Northern Virginia will grow by 8 percent from the period 2002 to 2007, according to the U.S. Census Bureau. This percentage is likely to grow as the “baby boomers” age – many of whom will just be reaching age 65 in the year 2020.
- » The population is highly educated – over 71% of the 25 and over population has received at least a high-school diploma and over 22% has received at least a post-graduate degree. High education rates provide multiple job opportunities and awareness of health care services.
- » The region has a low unemployment rate – Northern Virginia compares at a rate of 2.2% to a national rate of 5.4% as of August 2004 – making recruitment difficult and the need for employers to be creative in attracting employees.
- » Wages are comparatively high in the region, but the cost of living is higher. Pay differences between regional and national wages are not as high in health care as in industry overall, i.e., the health care industry may not be as pay competitive.
- » A large immigrant, foreign born, population exists which may be an untapped source of workers
- » Supply of new health care graduates is relatively flat
- » Ability to retain employees is difficult as short-ages burn out workers.

Aging Population Creates High Use

The aging population is expected to increase the occurrences of care and the intensity of care. Patients over the age of 65 generally use about 6 times the amount of inpatient days, according to national data.





Pipeline for New Graduates Does Not Appear to Be Adequate

Some studies across the country have shown that the number of new graduates in the health care occupations will be less than the number of professionals retiring in that year. Health care employers in Northern Virginia depend on graduates from area colleges and universities to fill current gaps and supply future needs. In many cases, the number of graduates in some fields is decreasing while the demand is increasing. The following looks at the number of vacancies and number of graduates in

Virginia for 13 health care occupations reported by the State Council of Higher Education of Virginia (SCHEV). The supply of graduates in Northern Virginia was estimated using two methods. Method 1 was estimated looking at the graduates from schools located in Northern Virginia.

Method 2 used an allocation, assuming that Northern Virginia would receive its share of graduates from the state's schools. To calculate that share, the number of graduates was multiplied by 27%, Northern Virginia's share of the state's population.

Method 1 - Number of Graduates in 2003 in Northern Virginia for Selected Occupations - Sorted by Number of Budgeted Vacancies

Health Care Occupations	Current Vacancy Rate	# of Budgeted Vacancies	# of Graduates from Northern Virginia Schools in 2003
Registered nurse	10.3%	1,038	440
Medical records/info tech	11.4%	172	8
Physical therapist	17.2%	119	63
Radiologic techs	13.1%	109	25
Physical therapist assistant	26.3%	91	14
Nursing administration	6.7%	76	18
Occupational therapist	16.0%	67	20
Speech language pathologist	27.4%	46	-
Medical lab technician	12.3%	32	6
Dental hygienist	3.8%	30	18
Pharmacist	14.6%	24	94
EMT/paramedic	2.1%	19	13
Surgical tech	0.0%	-	9

Method 2 - Number of Graduates in 2003 in Northern Virginia Based on Allocation Method for Selected Occupations Sorted by Number of Budgeted Vacancies

Health Care Occupations	Current Vacancy Rate	# of Budgeted Vacancies	# of 2003 VA Graduates Allocated to No.VA Based on Population %
Registered nurse	10.3%	1,038	658
Medical records/info tech	11.4%	172	4
Physical therapist	17.2%	119	38
Radiologic techs	13.1%	109	38
Physical therapist assistant	26.3%	91	7
Nursing administration	6.7%	76	5
Occupational therapist	16.0%	67	15
Speech language pathologist	27.4%	46	28
Medical lab technician	12.3%	32	29
Dental hygienist	3.8%	30	33
Pharmacist	14.6%	24	59
EMT/paramedic	2.1%	19	14
Surgical tech	0.0%	-	8



The actual number of graduates who take positions in Northern Virginia is affected by many factors, for example, immigration trends, quality of life, cost of living, salaries, and career opportunities.

Using graduation numbers is a proxy for meeting future demand, however, it has its limitations. The number of nursing graduates could lead one to believe that in two to three years, the health care employers in Northern Virginia could close the gap on nursing vacancies. As significant are compound-

ing variables such as: retirement age, demand, decreasing time in the profession, upward mobility, the decision not to work, etc. These factors have been identified in numerous studies conducted within Virginia, in other states and nationally.



Retirements Expected Will Offset Most of the New Graduates

Northern Virginia has a projected shortage of over 1,000 registered nurses, based on the survey results. There are no indications that this vacancy rate will improve in the near future. Vacancies result from increases in demand, departures from the field and retirements. These factors are expected to continue, at least in the near future.

When combined with a constant or decreasing number of nursing graduates, the shortage will worsen. Assuming the projected demand and vacancy rate, the gains from the new graduates will likely be offset by retirements, as shown below. This scenario assumes each nurse works an average of 30 years and therefore 1 in 30 nurses retires each year, and that Northern Virginia captures all of the 440 nurse graduates it currently is educating. As shown, by the year 2020, the vacancy rate will be 4,429 nurses or an increase from 10.3% in 2004 to 28.7%.

Nursing Supply Shortage Considering Retirement and Graduate Assumptions

Adjusted RN Shortage	2004	2010	2020
Projected Shortage	1,038	2,974	6,350
Cumulative Retirements (2004 to 2010 and 2010 to 2020)		1,818	3,301
Cumulative Graduates (2004 to 2010 and 2010 to 2020)		2,640	4,400
Adjusted Shortage	1,038	2,152	4,429

As stated, the average age of registered nurses in Virginia is over 45, according to the Virginia Hospital and Health care Association. The increasing age is a concern because it is anticipated that a greater than average number of registered nurses will be retiring over the next several years. The physically demanding nature of the nursing occupation contributes to the need to retire or change careers.

The projected shortages previously identified in this report do not include an expected increase in retirements or departure from the field of nursing. Increased retirements are expected and documented in numerous statewide and national studies. The table below shows the effect of an increasing retirement rate of the RN shortage. It considers an estimated retirement increase of 1 percent, i.e., a scenario of an additional 6% of the current RNs retiring by 2010 and an additional 10% retiring by 2020.

Registered Nurse Shortage Assuming Increasing Retirement Rates

Adjusted RN Shortage	2004	2010	2020
Projected Shortage	1,038	2,974	6,350
Cumulative Retirements (2004 to 2010 and 2010 to 2020)		2,412	4,401
Cumulative Graduates (2004 to 2010 and 2010 to 2020)		2,640	4,400
Adjusted Shortage	1,038	2,746	6,351

Similar retirement effects are anticipated in other health care occupations, such as imaging – radiologic technicians.

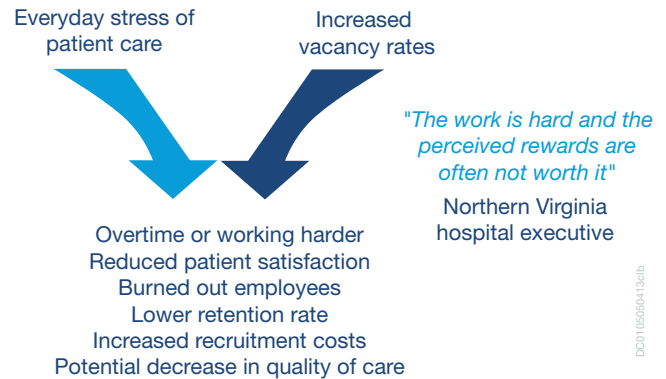


Nursing and Allied Health Care Faculty Are Difficult to Recruit

There is a serious faculty constraint in the educational system in part because there is not a sufficient supply of instructors and the starting faculty salaries are not competitive. The lack of nursing faculty has been identified in numerous state and national studies as a primary issue in the nursing and allied health care shortage. Industry lures away the Masters trained faculty to higher paying jobs as soon as they are fully trained. This creates faculty vacancies, which leads to fewer students being trained. A critical shortage of faculty is expected as the programs try to scale up. In addition, the faculty is aging - the average nursing faculty was 53.2 years in 2002 in Virginia, according to the Virginia Hospital and Health Association. Interviews indicated that the pipeline of potential enrollees in health care education programs is clogged by too few instructors. This logjam masks what the potential supply of new graduates could be.

Health Care Jobs Are Demanding – Increasing the Turnover Rate

High vacancy rates take a severe toll on both the employee and the facility. Direct patient care is a stressful and physically demanding profession. Health care providers cannot shut their doors when they don't have enough staff. Facilities require existing staff to work overtime, which takes its toll on those staff members, or use agency employees, which has a detrimental effect on the operating margin and the internal staff.



In interviews with Northern Virginia health care employers, overtime was currently the most common solution to staff shortages. Attention to staffing issues and enhanced retention programs had allowed the providers to reduce agency labor. Turnover rates in health care facilities are high. The turnover rate in Virginia overall for nurses is 29% and for LPNs is 30%, according to the Virginia Hospital and Health care Association.

Interviews with Northern Virginia hospitals indicated turnover rates of 10 to 20 percent. Rates among long-term care providers were higher. When turnover is high, especially for highly skilled professions, market rates and resultant costs increase as employers compete with each other for the same employee. Vacancies often result from issues such as burn-out, lack of career opportunities, and wages that don't keep pace with inflation.



Retention of Health Care Workers is a Key Problem

New graduates are only a part of the solution. Retention of qualified and motivated staff is critical. Direct costs related to staff turnover are high. Direct costs related to the turnover of one RN is almost \$30,000 according to a recent report on retention by The Advisory Board Company. This does not include the indirect costs related to lost productivity, declines in morale, etc. Issues related to retention include: need for improved leadership and management skills, more instructors and enhanced mentoring.

Comments from our interviews regarding retention follow:

- » Technical skills are critical, but shouldn't eclipse need for higher learning. Health care workers must be problem solvers. Programs must include these skills as well as technical skills.
- » Computerization will transform the industry, but could increase turnover. The workforce is aging and computerization may hasten workers' exits. "Mature age worker will be affected due to the lack of interest in computer-based technology," said one nurse recruiter.
- » The human side of health care can't be overemphasized. A nurse recruiter said: "The graduates are coming out unprepared to deal with the human side of health care. They do not know how

to deal with the patient and provide a high level of "bedside" care. It is not the clinical skills, it's the maturity and professionalism."

- » It's not all about money. While many interviewees said that salaries have to increase for certain professions, others worried about the implications of that trend. "Nursing is becoming a profession that is aspired to more now because of the high salaries than the love of the profession."
- » Health care occupations are high stress and more emotional support is needed. Health care providers need to provide a network of support for employees for total support. (Take care of our own.) There needs to be a safety net environment for employees.
- » Recruitment is difficult and demanding. Health care recruiters are stressed. "There is not enough HR Staff. Sometimes employees are hired who might not be fully qualified. This results in more rapid turnover. "

Retention of trained staff requires increasing the job satisfaction of the employee. Numerous studies have identified the causes of low job satisfaction in health care jobs. Significant opportunities exist to improve these jobs. Many of these involve automation, which may be adopted from other industries, such as robotics, electronic bedside ordering, electronic transactions, picture archiving and communications system (PACS), etc.



Northern Virginia Health Care Providers And Educational Institutions Are Already Using Best Practices...Further Innovations Are Needed

It is anticipated, especially with the current population growth projections, that the Northern Virginia health care providers will experience an increasingly difficult time recruiting and employing skilled health care professionals, especially in key professional categories, such as nursing, radiology, health IT.

Health care providers in Northern Virginia have developed and adopted some best practices for recruitment, retention and training. Career management and improvement to the job experience are key elements to retention. These include:

- » nurse excellence magnet programs
- » development of mentors
- » improved physician – staff relationships, etc.
- » monetary incentives to stay in the career field
- » career ladders
- » tuition reimbursement for career advancement

Many of these innovations are being implemented in the Northern Virginia facilities. For example, Inova Fairfax Hospital is a nurse magnet hospital. Northern Virginia providers are also looking for new sources of employees, such as the New Americans. This is a win-win for health care providers who need bilingual staff.

In addition, area employers, educators and business representatives are looking for solutions. Synergies have begun between the high schools, Northern Virginia Community College, George Mason University and the larger health care providers. Best practices include:

- » **Education and Training** – Providing health care training to persons new to health care or encouraging advanced training to persons outside of health care. Most programs achieve this through free training and education, paid training and internship opportunities, and accelerated training programs.
- » **Recruitment** – Recruiting new workers into the field of health care, e.g., new immigrants. These strategies also focus on encouraging workers that have left their fields to re-enter the workforce. Strategies around workforce recruitment often include enhanced benefits, loan forgiveness, increased marketing of health care careers, and flexible work hours.
- » **Retention** – Innovative benefits such as employee-driven scheduling, development of clinical specialists and clinical manager positions, market rate adjustments, the use of career ladders, and on-site child care.

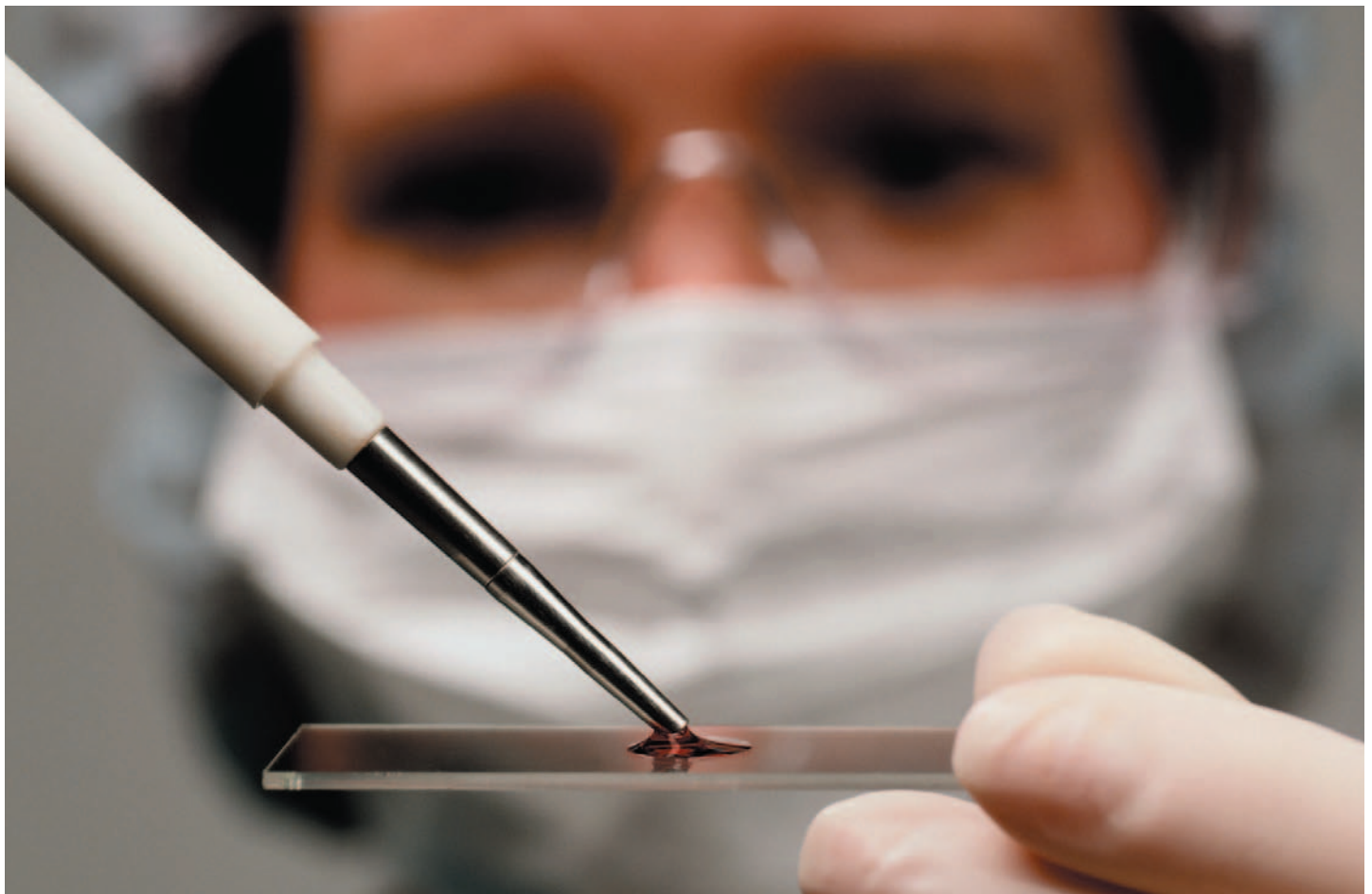


Specific challenges in the health care field are retaining the experienced employees who are so important in training and mentoring the less experienced employees. Significant years of experience are required before people in the skilled professionals are comfortable. Without mentors, the less experienced professionals are apt to leave.

Other opportunities exist with, e.g., grants and other research vehicles which are being provided by federal, state and local governments and foundations

to fund programs in education, recruitment, and retention. Examples of federal legislation include the Nurse Reinvestment Act and the proposed Allied Health Reinvestment Act.

The Northern Virginia region is well positioned with its overall highly skilled workforce, its business emphasis on technology companies and workers and its co-location with a number of post-secondary schools to create further innovative solutions to alleviate the projected health care workforce shortage.





Access To Health Care, Quality Of Care, And Quality Of Life May Be Negatively Affected As A Result Of The Shortages

The implications of the continued health care workforce shortage to the Northern Virginia are:

- » Health care costs will continue to increase
- » Quality of care may decline
- » Access to health care may diminish

The cost of care is increasing. Health insurance rates have continued to increase over the past few years. Several studies have correlated quality of care with adequate staffing. For example, according to a study in the New England Journal of Medicine, 53% of physicians and 65% of the public cited the shortage of nurses as the leading cause of medical errors. In addition, low nursing staff levels contributed to patient deaths and injuries in 24% of cases examined, according to a report by the Joint Commission on Accreditation of Health Care Organizations.

In a worst case scenario, access to care will be denied because there is inadequate staff. Northern Virginia has not historically been exposed to this limitation. Access to convenient quality health care is vital to a region's economic future. Residents want to live in areas that have high-quality health care services just as they want employment opportunities and high-quality schools. Proximity to health care services is important. The area's continued growth may hinge on access to quality health care services.





Northern Virginia Needs To Adopt Innovative Ways To Minimize The Growing Health Care Work Force Shortage

Northern Virginia needs to actively address its current and projected health care workforce shortage. Best practices need to be expanded. In addition, synergies among the health care providers, the educational institutions, and the economic development authorities and workforce planning commissions need to be more fully developed. Types of programs include:

- » increasing awareness of health care careers and job opportunities.
- » increasing recruitment both through education and training capacities and career mobility.
- » working with health care providers to enhance retention of quality health care workers through job advancement, job satisfaction, especially the over-40 workers.
- » creating training opportunities that provides employees multiple health care job opportunities.

Best practices also need to encourage new innovative ways to provide health care services. Northern Virginia is characterized with strong, innovative health care providers; a robust and mature information technology industry; and cutting edge research and discovery in the life sciences such as bioinformatics, genomics, and advanced imaging technology. Opportunities exist to integrate these capabilities, e.g.

Dr. David Brailer, President Bush's new health Information Technology Appointee, is interested in identifying regional health information organizations (RHIOs) to create a "permanent and accountable infrastructure to support health information exchange."

Northern Virginia, which is already a high-tech center, may be uniquely positioned to be one of the new Regional Health Information Organizations (RHIO). Funding for five of these pilot RHIOs will be provided through the Agency for Health Care Research and Quality.

New projects such as the Howard Hughes Medical Institute will support an environment of highly skilled and qualified researchers, scientists, and medical professionals. The spin-offs and synergistic institutions and companies created as a result of this research can provide an environment of innovation to solve the health care workforce shortage – both in attracting new and qualified employees and retaining those already in the industry.



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