

An Action Agenda
To
Establish a Long-term, Business-driven,
Sustainable Strategy
To Address the Northern Virginia
Health Care Workforce Shortage

Prepared By

Northern Virginia Health Care Workforce Alliance

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A call to Action.....

Issue: The healthcare workforce shortage is affecting the quality of life in Northern Virginia

The healthcare industry is currently experiencing explosive growth in our region and is one of the fastest growing sectors of the economy. The delivery of quality healthcare requires a highly skilled team. Examples of members of this team are: registered nurses, paramedics, respiratory therapists, health information management technicians, radiology technicians, dental hygienists, medical laboratory technicians and many other highly skilled healthcare workers. It takes every member of the team to insure quality healthcare.

There is, however, **today** an alarming shortage of these personnel and the entry of new health care workers is stagnant or declining. **Tomorrow** this shortage will be exacerbated over the next several decades by our region's increasing residents, the "graying" of our population and new technology which will place a greater strain upon our regions' ability to provide quality healthcare services. Because of this emerging demand for expanded healthcare services we must not only address today's critical shortage of nursing and allied healthcare workers; we must also now plan for the need in the very near future for thousands of additional highly skilled and trained healthcare workers. If we do not take **action now** than we will not have the healthcare team that is required in the future to provide quality healthcare to ourselves and our families.

Left unattended, this crisis will have significant negative consequences for this region, leading to problems not only in health care, but also to an economic competitiveness issue for businesses and a reduced quality of life issue for us all. A scarcity of healthcare workers will drive the cost of healthcare up further thus, driving the cost of healthcare insurance up for both businesses and families. This shortage will negatively impact the quality, cost and access for healthcare for you and your families.

Today A shortage of health care workers exists in Northern Virginia.

Health care providers in Northern Virginia are having difficulty recruiting quality health care professionals. There is an estimated shortage of about 2,800 professionals in 24 healthcare job categories.

Tomorrow The shortage will become critical!

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.*** (See chart)

Why does Northern Virginia have this healthcare workforce shortage?

- Significant population growth - the population is expected to grow over 33% by 2020. A rate over twice that of 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 along with the inability to find replacements
- Concurrent aging of clinical faculty and the resultant retirements
- Difficulties offering market competitive salaries for clinical faculty
- Supply of graduates from Nursing and Allied Health programs is not keeping up with demand.
- Nature of the healthcare profession is stressful and labor intensive.
- Low unemployment rates and high cost of living draws away qualified candidates.

How do we know this?

The **Northern Virginia Health Care Workforce Alliance** (NVHCWA), a *Coalition of business, academic and community leaders*, engaged PricewaterhouseCoopers to conduct a study of these issues. They analyzed the scope and impact of the healthcare workforce shortage on Northern Virginia. The results are found in the following report:

The Health Care Workforce Shortage: An Analysis of the Scope and Impact on Northern Virginia. (January 2005)

Executive Summary of: The Health Care Workforce Shortage: An Analysis of the Scope and Impact on Northern Virginia. (January 2005)

What must be done?

The Northern Virginia Health Care Workforce Alliance (NVHCWA) advocates that the solution to deal with the Northern Virginia health care workforce shortage must be the ***Establishment of a long-term, business-driven, sustainable strategy***. The solutions must:

- Be “business-driven”
- Have the business community understand that this affects everyone’s quality of life in Northern Virginia.

- Have the entire Northern Virginia community recognize that the health care workforce shortage is more than a hospital problem. This problem affects all components of community life
- Provide upward mobility for “New Americans” and underemployed
- Address workforce utilization and retention in the health care industry
- Be self-perpetuating

Actions required now:

I. Increase capacity within the healthcare education and training system.

II. Develop and sustain an ongoing supply of persons interested in health care careers

III. Nurture Innovation

This report outlines the detailed steps necessary to accomplish the actions necessary to arrest the immanent healthcare crises in Northern Virginia.

These action steps were developed through the efforts of eight workgroups. Each composed of subject matter experts representing: healthcare, higher education, proprietary schools, public school districts, local county governments, federal government, social service agencies, workforce development authorities, civic organizations, businesses, economic development authorities, philanthropic organizations and the information technology industry.

What is the solution to accomplish these actions?

The alignment and resource commitment of healthcare, business, education, media, faith-based, civic, philanthropic, social service organizations and economic development authorities is required in order to accomplish the actions necessary to attend to the healthcare workforce shortage crisis.

This crisis will impinge upon the quality of life of the entire Northern Virginia community. Thus, all of the components of our community must be rallied to solve this impending crisis.

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

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	

Source: The Health Care Workforce Shortage: An Analysis of the Scope and Impact on Northern Virginia. (January 2005)

I.

Increase capacity within the health care education and training system

1. Challenge: The primary obstacle to increasing the enrollment in Nursing and Allied Health programs is the shortage of available faculty. These programs are instructor intensive because accreditation board standards require a very high ratio of faculty to students. Too few instructors are the “bottleneck” in the pipeline of potential enrollees in health education programs. Additional reasons for this shortage are:

- The current faculty is aging. The average age of nursing faculty in Virginia in 2002 was 53.2 years.
- Faculty pay and benefits are not competitive. Industry lures away faculty to higher paying jobs.
- Lack of nurses with Master’s in Nursing (MSN) that can be recruited to be nursing faculty (MSN required for nursing faculty). Obtaining an MSN is not easy for working adults. Plus, the compensation offered to faculty does not adequately compensate for the effort and expense required to obtain an MSN.
- An increase in the number of faculty with Master’s degrees will require an expansion of the area’s doctorate level programs.
- Tuition does not cover the high cost incurred by Virginia State educational institutions to offer Nursing and Allied Health programs. Also, the Virginia State formula used for compensating universities and colleges, which is based on a Full Time Equivalent Students (FTES) formula, does not adequately fund institutions that offer these programs because of the high faculty to student ratio required for these programs by their accrediting bodies. Thus, these educational institutions are “penalized” for offering Nursing and Allied Health programs. These institutions rely on other programs, such as general education courses, to help offset the high cost of supporting their Nursing and Allied Health programs. From a fiscally prudent point of view, Virginia educational institutions would be better off financially if they did not offer Nursing and Allied Health programs!

Actions to address the lack of Nursing and Allied Health Faculty:

1a. The Virginia State Legislature must insure the compensation of Nursing and Allied Health faculty is competitive to attract and retain qualified professionals.

1b. The Virginia State Legislature must revise the funding allocation formula that does not adequately fund public educational institutions that offer Nursing and Allied Health programs. Funding for the Nursing and Allied Health programs must represent the true costs of providing these programs.

1c. Education and Healthcare institutions in Northern Virginia must partner with industry to increase the number of Nursing and Allied Health Faculty. This alliance will:

- Create “Dual appointments” of healthcare employees as faculty in educational institutions. Such dual appointed faculty would receive a competitive compensation by a formula based on the educational institutions paying their official faculty rate and the healthcare institutions paying the incremental difference between the normal faculty salary and the industry’s competitive compensation standard. These dual-appointment faculty members would be employees of both the educational institutions and healthcare institutions. They would be twelve (12) month employees of the healthcare institution vs. the standard nine (9) month faculty contract of an educational institution. When these faculty members are not instructing, they would be part of the healthcare institution’s staff. (Note: this would not be attractive for all faculty members since many desire nine-month employments vs. twelve-month employment)
- Provide the opportunity for sabbaticals to healthcare institution employees to obtain appropriate degrees to be qualified to be Nursing or Allied Health faculty. This would help alleviate the high “burnout” rate among healthcare workers.
- Industry (not only the healthcare industry) should endow chairs for faculty at the associate, masters and doctoral degree level. Industry has a vested interest. Northern Virginia industries involved in IT could endow chairs in Health Information Management. Endowments from manufacturers of healthcare equipment should support “chairs” in Respiratory Therapy, Radiology Technology, Nursing, Medical Laboratory Technicians and/or Technologists etc. The incentive for industry to endow a chair would be for them to use this as a marketing, tax and public relations instrument.

1d. Educational institutions must develop “fast track” educational pathways, in the healthcare professions to the bachelor, master and doctorate levels, which are:

- Geared to the working adult.
- Have better and easier articulation between degree levels.
- Provide a mechanism which allows for credit from other educational and work experiences.

1e. Educational, healthcare, civic and social service institutions must collaborate to identify promising minority and new Americans to “groom” them early to be

faculty through well-defined and financed career paths that couple appropriate academic and professional experiences.

1f. Educational institutions must become more attractive to adjunct faculty by:

- Providing competitive compensation. Healthcare professionals can realize higher monetary rewards by working part time in their profession vs. being part time faculty.
- Compensating for class preparation and administration (grading, etc)
- Greater use of distance learning technology will be attractive for recruiting adjunct faculty.
- Aggressively target Nursing and Allied Health retirees to become adjunct faculty members.

1g. Educational institutions must be able to:

- Benchmark faculty compensation in accordance with prevailing industry compensation standards. (This would necessitate differential salaries for faculty in highly competitive disciplines such as Nursing and Allied Health.)
- Dedicate more resources to recruitment and marketing.
- Streamline the application procedure and time required for hiring.
- Simplify and modernize the compensation methodology used to determine a new faculty member's salary.
- Provide greater flexibility for faculty contracts (i.e.: semester, nine-month, twelve-month etc.)

1h. Target retired military healthcare professionals. (There is already an established program to recruit separating and retired military personnel into primary and secondary schools.)

- Dedicate resources to recruitment and marketing.
- Develop fast track programs to develop them as educators/distance educators.
- Provide flexible schedules and compensation packages.
- Target active duty healthcare military to become adjuncts. This would serve as a transitional catalyst prior to their retirement. Active duty military could be distant learning adjunct faculty even when overseas.
- Target retired military especially as distance learning faculty. This would provide them with the flexibility to reside anywhere (not just the Metro DC area) and flexible hours.

2. Challenge: The second major factor limiting a significant expansion of Nursing and Allied Programs is the inability to obtain additional clinical training sites and

site faculty for a number of programs and specific clinical areas within other programs. Healthcare institutions are reluctant to grant additional training sites. They are short staffed and do not receive reimbursement for the expenditure of their resources (staff, equipment, patient appointment slots, etc.) in the support of clinical training.

Actions to address the need for additional training sites and clinical faculty:

2a. College and university presidents together with health care institution CEO's must meet and develop new guidelines for the proper allocation and utilization of clinical facilities. This will ensure the maximization of clinical training sites (time, specialty, day vs. night & weekend, sequencing of coursework etc) and clinical faculty.

2b. Implement the dual appointment of healthcare institution staff as clinical site instructors. Provide reimbursement to the healthcare institutions sites for this additional role of their staff. Healthcare institutions have very tight operating margins and reimbursement would provide them the opportunity to expand their staff incrementally to perform this function. A small incremental expansion of a healthcare institutions staff would be more cost effective and efficient than educational institutions having to hire additional faculty to perform this function. The Northern Virginia business community should be solicited to financially support this initiative.

2c. Educational institutions should maximize the use of human patient simulators to prepare students before they go to a clinical site. This allows maximum training at the clinical site and minimizes the amount of time needed at the clinical site to master required competencies. Human patient simulators however, are very resource-intensive for purchase, maintenance, expendable supplies, and training faculty. Realization of the full potential of human patient simulators requires the employment of dedicated laboratory staff. State government, business and industry will need to financially support the expansion and advanced use of patient simulators in educational institutions.

2d. Conduct a feasibility study on the use of human patient simulators as a proxy for *some* clinical training site experiences. The use of human patient simulators as a proxy for *some* clinical training site experiences would require the approval of the applicable nursing and allied health accrediting bodies.

3. Challenge: All of Northern Virginia's Nursing and Allied Health programs are located in the northern and eastern parts of the Northern Virginia region. However most of the projected population growth and corresponding increase in medical treatment facilities will occur in the western and southern portions of this region.

Actions to meet the projected increasing population and commensurate healthcare demands in the western and southern portions of the Northern Virginia Region:

3a. GMU and NVCC must develop collaborative plans for a joint Nursing and Allied Health training center, located in Prince William County, Western Fairfax County and/or Loudoun County to serve the requirements of an expanding population and corresponding expanding healthcare demands in this vibrant portion of the region.

3b. In order for a joint Nursing and Allied Health training center to be a reality, funding requirements must be defined by the educational institutions and a funding strategy must be developed in collaboration with the Northern Virginia healthcare industry (ambulatory, inpatient, and long term), business leaders (Fairfax Chamber, Loudoun Chamber, Northern Virginia Technology Council, Roundtable etc.), public officials (local, state and federal elected representatives) and economic development entities together with the educational institutions.

4. Challenge: To ensure that the Northern Virginia education and healthcare institutional resources are being optimally utilized to provide the greatest training capacity and maximum output of healthcare professionals. We need to exploit educational resources (faculty, classrooms, laboratories, clinical sites etc.) in Northern Virginia to create the most efficient and effective model for increasing the output of Nursing and Allied Health professionals.

Actions to insure optimal resource utilization to increase capacity and output of Northern Virginia educational and healthcare institutions:

4a. The Northern Virginia Healthcare Workforce Alliance will convene a working group of all the stake holders to study the utilization of educational resources. They will make recommendations for the most efficient and effective use of these resources.

4b. Maximize educational resource potential by the combination or expansion of these limited resources to create synergy and centers of excellence.

II

Develop and sustain an ongoing supply of persons interested in entering health care careers

5. Challenge: Increase awareness of the healthcare career fields among students, parents, educators, counselors and community organizations. The mainstream of the Northern Virginia residents, to including high school educators and counselors, are simply not aware of the assortment, functions, educational requirements and compensation rewards of the careers available in the healthcare industry.

Actions to increase career awareness in healthcare career fields:

5a. Parents must be targeted as the first priority to be made aware of the richness of careers available in healthcare for their children. Educators state that parents do not realize the opportunities that are available for their children in vocational, technical and community college education. Many parents feel that they have failed if their children do not attend a four year academic institution. They don't realize that nearly half of American students who enter college fail to earn a degree within six years and that less than one-fifth of the nation's high school freshmen complete a college degree in a timely manner. Parents need to be made aware of and embrace the concept of career ladders as a viable option for their children entering healthcare. Parents must also be made aware of the importance of basic math, English and science while their children are in high school in order to prepare them for college and/or the workplace. Thus, parents can insist their children take college-preparatory courses and the high schools offer more opportunities for students to earn college credit or to pursue training to win certification for entry level healthcare careers. Healthcare, business, education, media, faith-based, community, philanthropic and social service organizations must align to launch a campaign to educate parents on the career opportunities in healthcare and the importance of high school preparation. For example, multiple "open houses" targeted towards parents in healthcare institutions in conjunction with education and community organizations could be held.

5b. School system administrators, high-school principals, teachers and counselors require supplementary and uninterrupted instruction and resources on the careers available in healthcare. Many counselors' knowledge of healthcare career fields is based upon what they see in the popular media. A poll of 100 high school counselors revealed that not one knew of the professions of Registered Health Information Technician (RHIT) or Registered Health Information Administrator (RHIA). Yet, these professions are part of the fastest growing career field in healthcare. Healthcare Information Management has one of the greatest demands for workers in Northern Virginia. The healthcare industry and higher education must work in concert with the Northern Virginia public

school systems to “educate the educators” in healthcare careers and the preparation required to enter these careers. Students need career counseling and information early in their education experience.

5c. Intensive efforts must be made to enlighten and expose students early and throughout their middle and high school years on the variety of healthcare careers and the preparation required to enter these fields. Efforts must be made to target college students who started with a four year program and dropped out and those who have completed four years and have no marketable skills and/or jobs. There must be an alignment and resource commitment by healthcare, business, education, media, faith-based, civic, philanthropic social service organizations and workforce economic development authorities to accomplish this objective. Example:

A healthcare organization, an educational institution, and a public school district could link together to pilot a comprehensive health careers awareness campaign for middle and high school students. Once the concept is developed and proven, all the healthcare institutions, educational institutions, and school districts in Northern Virginia should be invited to join the program.

5d. A healthcare career web site should be developed, specific to Northern Virginia as a resource for parents, educators, students, media, employers, faith-based, civic and social service organizations.

5e. Northern Virginia businesses and philanthropic organizations should assist in the sponsoring of a sustained media campaign (TV, radio, print) informing parents, students and the general public about the opportunities available and the requirements for careers in healthcare.

5f. Establish a centrally located health career information center which will provide parents, students, educators and social service organizations with current and correct information regarding the numerous health career paths available.

6. Challenge: Improve healthcare career preparedness of Northern Virginia high school students. Many high school students graduate without a vocational skill or the English, math, and science skills necessary to succeed in post secondary education

Actions to improve healthcare career preparedness:

6a. Northern Virginia School Systems must place greater emphasis on career and technical training. This training does not have the same value placed on it in Northern Virginia as preparation for a four year college.

6b. Apprenticeships for high school students must be developed in conjunction with the healthcare industry. These healthcare apprenticeships should be considered the “first rung” of a career ladder.

6c. Strengthen interventional assistance programs (after school programs, summer programs etc.) in English, math, science and ESL through the greater involvement and alignment of business, philanthropic, civic and social service organizations.

6d. The school systems in Northern Virginia must develop interregional collaboration of high school academy healthcare programs and adult education programs. County lines should not be the primary or only factor in determining the location of programs.

6e. Colleges, universities and public schools should develop educational opportunities for students to study college-level subjects in health fields while still enrolled in high school. Thereby, taking advantage of the student interest in health care and accelerating the time from graduation from high school to college graduation and entry into a critically needed healthcare profession.

6f. Create a Healthcare Career Bridge Program as the beginning college year for recent high school graduates. Fifty percent of the registered nurses and the majority of the allied health workforce receive their training in community colleges. These programs receive very few of their students directly out of high school. The primary reasons for this are that these programs require prerequisites, the programs are filled (discourages high school students from enrolling) and many high school students require basic skill developmental work. A very small percentage of graduates from community college nursing and allied health programs complete these programs in only two years. In order to increase the number of students entering these programs directly from high school Northern Virginia Community College should institutionalize a three year program for recent high school graduates. The first year would be the Healthcare Career Bridge Program year. During this year students would receive intensive assessment, academic and career counseling, complete general education and prerequisite course requirements and developmental courses. At the completion of this year, students could either enter NVCC’s Nursing or one of its Allied Health Programs or transfer to a four year institution. This Healthcare Career Bridge Program would have the additional benefit of cutting down attrition in the NVCC and four-year institution programs.

6g. The Northern Virginia Health Care Workforce Alliance will form a task force with the Northern Virginia School Systems to collectively explore the creation of a Regional High School for Healthcare Careers. This Regional High School for Healthcare Careers should incorporate:

- College preparatory courses (Dual enrollment. IB & AP) to meet healthcare program requirements.

- Vocational and technical education programs to prepare students for employment in a healthcare career field immediately upon graduation.
- Adult healthcare technical education programs coupled with basic skill & ESL education.
- Intensive healthcare career counseling.
- Healthcare Apprenticeship programs.
- The requirement that every graduate be EMT-Basic certified.
- Co-location of a Northern Virginia **SkillSource** One Stop Center.

Advantages to a Regional High School for Healthcare Careers:

- Resource consolidation
- Elimination of the loss of travel time associated with academy programs
- Enhanced alignment and synergy with industry, higher education, social service agencies and **SkillSource**.
- Concentration of educational expertise and counseling.
- Integrated curriculum.

6h. The Northern Virginia Health Care Workforce will form a task force with the Northern Virginia School Systems to explore with the Virginia Department of Education the feasibility of initiating an Academic-Year Governor's School and/or a Summer Regional Governor's School.

7. Challenge: Provide upward mobility opportunities in the healthcare careers for new Americans, ethnic and racial minorities, low-income, and low skilled working adults.

Actions for upward mobility in healthcare careers:

7a. Healthcare, business, education, philanthropic, civic, and faith-based social service organization and economic development authorities must become strongly aligned to meet this challenge. These organizations are not capitalizing on the accomplishments that could be realized if they developed a cooperative effort. An entity must be created to orchestrate the many superb programs and initiatives that are taking place in Northern Virginia. Unfortunately, many of these efforts are being conducted in a vacuum.

7b. The technical training of New Americans, ethnic and racial minorities, low-income, and low skilled working adults requires:

- A living wage
- Healthcare benefits

- Reading, writing and math skills
- ESL
- Basic skills training
- Tuition Assistance
- Diagnostic assessments
- Short term intensive learning programs vs. the traditional education linear fashion
- Comprehensive student support services
- Career Ladders/lattices
- The development of non-credit to credit programs

7c. Proliferation in Northern Virginia of the following models:

- The Urban Alliance Foundation, Inc. (Washington DC)

The Urban Alliance Foundation has a program in existence in Washington DC that provides for at risk youth: mentoring, remedial instruction in English and math, life/work skills, training and employment as a CNA, and concurrent enrollment in the University of the District of Columbia's Associate Degree RN program.

- Northern Virginia Family Service's Training Futures Program:

Training Futures (TF) and Northern Virginia Community College (NVCC) have already developed a model, in which they are prepared to commit to producing newly-trained health care administration workers. Some of these TF/NVCC grads will move on to more advanced Nursing and Allied Health education within a year of graduation from this program. Training Futures and NVCC have successfully developed a coalition of community supporters (100+ referral agencies and over a dozen health care employers)

- Workforce Organizations for Regional Collaboration (WORC):

WORC brings employers and service providers together to provide individuals in the Washington DC region with pathways to independence.

- Workforce Investment Boards

This is a team of private and public sector partners whose mission is to advance an integrated, responsive workforce investment system to help businesses and job seekers stay competitive in today's economy.

7d. Develop in Northern Virginia pilot career ladders/lattices (incorporating the principles and the best practices of programs listed above) for:

- Nursing (CNA to LPN to RN)
- Health Information Technology (Health Information Office Specialist to Clinical coder to RHIT to RHIA)
- Long Term care (Career Ladder: Apprenticeships beginning in high school, combine hospitality and healthcare)
- Dental Assistant to Dental Hygienist

8. Challenge: Facilitate foreign-trained healthcare personnel to enter the Northern Virginia healthcare workforce. Provide them with career ladders for upward mobility in order for them to realize their full potential. These new Americans are a valuable resource that must be cultivated to help address our healthcare workforce shortage.

Actions to facilitate foreign-trained healthcare personnel entering the Northern Virginia healthcare workforce:

8a. To integrate foreign trained health care new Americans into the Northern Virginia healthcare workforce, there must be an alignment and resource commitment by healthcare, business, education, media, faith-based, civic, philanthropic, social service organizations, and economic development authorities working in concert.

Identify a single entity in Northern Virginia to coordinate among education, industry, social service agencies, and economic developmental authorities. This organization will provide intensive counseling and career management. Its main purpose will be to identify and inventory skills. Assessed skills will include healthcare, language and essential work aptitudes. This alignment must provide:

- Entry level healthcare positions with competitive compensation and benefits in accordance with the individual's skills.
- Language, cultural and essential work skill training
- Technical training
- Preparation for licensing exams

8b. Health Information Management (Clinical coding, RHIT, RHIA) could easily capitalize on the basic medical training these foreign trained healthcare personnel have received.

Case in point: Three of the nineteen trainees who are waiting to start the first Training Futures/Northern Virginia Community College health care training cycle [See paragraph 7c (2)] are foreign-born legal residents who have health care experience. They came to TF without knowing that TF was preparing to convert to a health care training program. None of these three presently work in health care. One has a CNA credential and worked for seven years as a home health aid, but left that position and started driving a school bus

because she could earn nearly twice as much driving a bus! The two others both have nursing credentials from overseas. One of them worked as a nurse in Vietnam for 5 years, and wants to get back into nursing here.

III

Nurture Innovation

9. Challenge: The adoption of technology in healthcare has not kept pace with other industries. Productivity and quality enhancing technology becomes critical in light of the crises in the healthcare workforce. Interoperable healthcare technology has the potential to increase workforce productivity while at the same time improving clinical care and quality. Examples of interoperable technologies are:

- Electronic medical record (EMR) and/or Electronic Health Record (EHR)
- Radio frequency identification (RFID) systems for tracking assets (for example: ventilators, IV pumps etc.) and patients
- Digital radiology systems
- Ambulatory and inpatient computerized physician order entry (CPOE) systems
- The “e-ICU” for remote management of multiple ICU’s by offsite intensivists and nurses
- Point-of-care (POC) laboratory testing
- Automated/computerized nurse documentation systems to reduce paper records and the repetitive entry of information
- Automated patient management and reminder systems
- Diagnostic equipment that automatically populates patient information systems with data
- Bar coding
- Direct-access wireless communications systems
- Clinical decision support systems at the point of care
- Telemedicine

Technology will have a direct impact on: direct patient care time, number of errors and adverse events, documentation accuracy, documentation methodology, process efficiency, patient safety, and satisfaction. This will improve staff satisfaction, reduce stress, and improve retention. The adoption of technology has been limited in healthcare because of the lack of the following:

- Capital due to tight operating margins
- Reimbursement rates below the actual cost of providing a technology
- A national system for the exchange of digital information
- Standardization for technology interoperability
- Comprehensive research

- Provider acceptance
- Trained health information management professionals

Actions for enhancing the adoption in Northern Virginia of information technology in healthcare:

9a. It is improbable that the Commonwealth of Virginia or the Federal Government will provide adequate funding for the development of a Northern Virginia regional system necessary to realize the full potential of the benefits of health technology. Northern Virginia has the healthcare institutions, educational institutions, technology industry, economic development authorities and infrastructure and the skilled IT workforce to be the nation's leader in healthcare technology. These resources should be exploited in Northern Virginia by the formation of a Northern Virginia Healthcare Technology Solution Task Force. This Center would lead the establishment of a system in Northern Virginia for the healthcare technology. It would support the adoption of electronic medical records (EMR) by healthcare facilities (acute, long term, diagnostics centers, ambulatory surgery centers, pharmacies, 3rd party payors etc.) group practices and solo providers. Implementation of an EMR is reliant upon adoption of health information technology by solo and small group practices. These practices do not presently have the capital, technology infrastructure, staff and training required to embrace the EMR. The Center would also be an incubator for the development and rapid adaptation of additional healthcare technology in Northern Virginia by coordinating: funding, education, interoperability and pilot testing. The Northern Virginia Healthcare Technology Solution Task Force could become a model for the Commonwealth and the rest of the nation. The standardization of technology and its rapid adoption would save the U.S billions in healthcare costs by improving quality, reducing errors, and eliminating redundancy.

9b. To progress as the leader in healthcare technology, Northern Virginia must strengthen and fund its educational programs by:

- Strengthening and developing its network of academic healthcare information technology programs at the associate, baccalaureate, masters and doctorate degree level.
- Increasing the recruitment and IT competency of faculty in healthcare technology, nursing and allied health programs.
- Insuring the curricula of Nursing and Allied Health programs have a greater emphasis on IT.
- Insuring that Healthcare Information Management, Nursing and Allied Health programs have the funding for state-of-the-art technology.
- Educating parents, educators and students of the vast opportunities a career in healthcare technology provides.
- Providing upward mobility opportunities for new Americans, low skilled and low wage workers.

- Providing training opportunities/continuing education for incumbent healthcare workers in healthcare technology.
- Establish and develop George Mason University as the nation's predominant research institution for healthcare information technology. Northern Virginia has the educational, healthcare and information technology institutions to cultivate world-class research and application of healthcare information technology.

This can be accomplished by the alignment of education, the healthcare industry, the technology industry and economic development authorities. Industry can sustain endowed chairs to attract and maintain prominent faculty; provide sabbatical opportunities for their expert employees to be faculty and/or researchers. It can also provide funding for research, state-of-the equipment, career awareness and mentoring programs for students. Industry should also develop opportunities for retirees with technology expertise to become adjunct faculty or researchers. Funding can also create career ladders, internships and training.

10. Challenge: The healthcare consumer is the greatest underutilized resource in healthcare. The potential of the healthcare consumer must be harnessed to act as a “force-multiplier” for the healthcare workforce. This cuts down on the demand for healthcare services.

Actions for harnessing the potential of the healthcare consumer:

10a. The clinician and consumer relationship needs to be enhanced and strengthened by:

- Electronic communications between patients and their clinicians
- Disease management systems to include reminder systems for both the clinician and consumer
- Remote monitoring of patients with chronic diseases
- Utilize information technology systems to flag abnormal laboratory results and coordinate communications among primary care clinicians, specialists, testing labs and consumers.
- Home screening and testing by consumers in advance of medical appointments.
- The Northern Virginia Healthcare Technology Solution Task Force should pilot the use of a new category of healthcare worker, and development of technology to facilitate this clinician and consumer interface. The Center would also have to address reimbursement issues necessary to entice providers to operate in a preventive care vs. an acute treatment modality.

10b. Provide consumers with the knowledge and ability to better manage and monitor their own care by:

- Adoption and utilization of an EMR or Electronic Health Record (EHR) that in addition to medical history provides tools for both the clinician and consumer:
 - Appointment, vaccination and test reminders
 - Education
 - Prescription refill
 - Co-pay balance and insurance information
 - Self entered metrics (blood pressure, weight, blood sugar, cholesterol, heart rate)

The Veteran's Administration currently has such an EHR for its consumers and clinicians. It is called the "My Health@Vet".)

- Exploitation of the Internet as a potential tool for seniors (ages 65 and older). Seniors must become comfortable using the Internet. They should be targeted for consumer health information workshops or one-on-one tutoring sessions over the internet. Relevant topics for seniors will include: wellness, diseases and conditions, drugs, health insurance, Medicare/Medicaid, healthcare facilities and providers, community resources, etc.
- The utilization and proliferation of advanced technology modalities in the acute, long term and ambulatory environments. This will enhance patient education and dialogue with clinicians.
- The Northern Virginia Healthcare Technology Solution Task Force should conduct a pilot study to assess the feasibility, effectiveness and clinician acceptance of a consumer owned Personal Health Record (PHR). The PHR feasibility pilot has two advantages over the creation of an EMR national standardized network. First, the implementation and consequential knowledge would be swifter. Second, its cost would be underwritten by consumers, employers and health plans.

11. Challenge: The enormous demand for qualified healthcare workers coupled with the shrinking supply as well as a low unemployment rate and an aging healthcare workforce will set in motion the impetus for the healthcare industry to improve on existing human resources and educational approaches. The healthcare industry must make better use of incumbent employees. They need to create new ways to attract, educate, retain and utilize Nurses and Allied Health workers and other support personnel. Enhanced human resource management and educational programs for current employees have the ability to pay for themselves by reducing staff turnover. This will decrease the expenditures for recruitment, training and patient safety. Staff productivity will in turn increase.

Actions for innovative approaches in healthcare human resource management to:

11a. Healthcare should provide incentives for over age fifty employees to postpone retirement. Concurrently, develop re-entry programs for those who have left healthcare careers, but still desire to contribute. This is the easiest and quickest solution for the current healthcare workforce shortage. Doug Portez of Qorvis has stated: *“The healthcare workforce shortage is the ‘perfect storm’ of demographics.”* The general population is getting older as the healthcare workforce ages.

- Establish the Northern Virginia Association of Retired Healthcare Employees to register and coordinate retired healthcare workers. This information would show who might be interested in working part time, teaching, mentoring new workers, mentoring new Americans, mentoring high school students, and providing career awareness to parents, educators, and students.
- Develop training programs, with full time-pay and benefits, during training, for exceptional older healthcare workers who might stay in the workforce if given the opportunity to retrain into less strenuous and /or stressful occupations. Examples: clinical coding, Nursing and Allied Health full time or adjunct faculty.
- Develop re-entry programs for retirees who have left healthcare but wish to return.
- Develop flexible work schedules, compensation, and benefit plans that attract and meet the needs of older workers.
- Develop methodologies and technology that accommodate the physical limitations of older workers.

11b. Healthcare institutions must create integrated career and educational ladders within their human resource systems. These should be initially directed at creating opportunity for existing workers who have demonstrated commitment and potential. These institutions should also use integrated career and educational ladders as a recruitment tool for new Americans and the economically disadvantaged. These initiatives generate new skills and cultivate an atmosphere in which workers can perceive opportunity and long term employment. Reducing the costs associated with staff turnover can fund the training and education of incumbent and new disadvantaged workers.

11c. The American Hospital Association report ***In Our Hands*** (April 2002) has several recommendations that are applicable to Northern Virginia:

- Assist incumbent workers with the education and training necessary to keep up-to-date with the rapid and constant changes in medicine and technology.

- Establish partnerships with industries outside of healthcare to learn from their expertise in designing work and work processes. (This is especially applicable to the utilization of information technology due to Northern Virginia's robust IT industry.)
- Mentor, educate and train front-line supervisors and managers. (They are the key to the retention of satisfied, long term employees.)
- Establish competitive wages, benefits, and upward mobility opportunities for entry level positions in ambulatory, inpatient, and long term facilities. Healthcare institutions must provide entry level workers the same compensation packages offered in the service industry (fast food, etc.). Given the shift work and unpleasant tasks required of healthcare workers compensation packages are not commensurate or competitive.

12. Challenge: In order to remain competitive and meet the evolving requirements of healthcare delivery and technology, Northern Virginia must be focused on the healthcare careers of the future.

Actions for the healthcare careers of the future:

12a. One of the underlying principles that Northern Virginia industry and education must embrace is to create opportunities for incumbent healthcare workers to advance into the careers of the future through career ladders.

12b. Northern Virginia should be the nation's leader in the development of careers in "SmartBio" which are the emerging careers found at the intersection of the Life Sciences, Biotech and Information Management. The development and use of pharmacogenomics and bioinformatics-based tools for "personalized medicine" is an example of "SmartBio"

12c. Examples of jobs of the future:

Future Job title: Senior Care Manager

Description: Blend of hospitality and health care worker.

Challenges: As the senior population grows and the number of residents in long term care facilities increases, there will be a need for a new type of worker with unique skills and matching compensation. The skills required in a long term facility worker are different than those required of an acute care facility worker.

Future Job title: Health Information Office Specialist

Description: Office Management, administration, billing, clinical coding, HIPAA compliance and Electronic Health Record (EHR) management for a solo physician's office or small group practice.

Challenges: If there is going to be an EMR or EHR for every American, solo physicians' offices and small group practices must have affordable skilled workers to manage them.

Future Job Title: "Supertechs"

Description: “Supertechs” oversee multiple modalities (e.g. multiple diagnostic tests, multiple types of rehabilitation therapies)

Challenges: Providing career and education ladders for incumbent workers who have entry level clinical skills.

Future Job Title: Health Information Care Navigator

Description: Acts as a bridge between the consumer and the healthcare system.
Core

competencies: EMR/EHR, comprehension of the healthcare system, consumer advocate, health information management/IT, reimbursement systems, and knowledge

management. (This would be an excellent position for semi-retired healthcare worker.)

Challenges: Where does this position reside and what are the reimbursement mechanisms?

Future Job Title: Pharmacogenetics specialist/counselor

Description: Expert in relationship of genetics and responsiveness/reactions to specific drugs/biologic therapies. The Pharmacogenetics specialist/counselor would provide guidance for treatment based on patient’s genetic profiles.

Challenges: Continuing development of pharmacogenomics, and adoption in medical research, followed by universal adoption in medical practices.

13. Challenge: The healthcare industry (ambulatory, inpatient, long term) and ancillary businesses do not have a common forum in Northern Virginia to share its best practices and information. This includes networking and public policy advocacy.

Action for developing a common forum:

13a. One of the existing business organizations in Northern Virginia should form a healthcare sector group to:

- Serve as a clearinghouse for information, an incubator for innovation, and as an advocate for the healthcare industry in Northern Virginia.
- Develop a measurable system of accountability (report card) to monitor and evaluate the accomplishments of the actions outlined in this report.

14. Challenge: An organization should be designated in Northern Virginia to have responsibility for coordinating the implementation of the actions outlined in this report.

Actions for designating an organization:

14a. This should be an organization with experience in the responsibility for:

- Coordinating of business, industry, education, social service, and governmental efforts related to the actions outlined in this report
- Managing 501c (3) programs
- Monitoring the number and types of health care jobs created in the region.

Acknowledgements

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