



HIGHMARK.
FOUNDATION

Addressing the
Nursing Shortage

in Pennsylvania through Grantmaking



About the Highmark Foundation

The Highmark Foundation, created in 2000 as an affiliate of Highmark Inc., is a charitable organization and a private foundation that supports initiatives and programs aimed at improving community health. The foundation's mission is to improve the health, well-being and quality of life for individuals who reside in the Pennsylvania communities served by Highmark Inc. The foundation awards two types of grants: Highmark Healthy High 5, which includes a focus on the health and well-being of children in the areas of physical activity, nutrition, self-esteem, bullying and grieving; and its traditional four areas of general health focus, which include chronic disease, communicable disease, family health and service delivery systems. Where possible, the foundation looks to support evidence-based programs that impact multiple counties and work collaboratively to leverage additional funding to achieve replicable models. For more information about the Highmark Foundation, visit www.highmark.com.

Executive Summary

Nurses traditionally have been the main support of the health care system. Today, the design of the health care system has changed, also changing the role of nurses and the nursing profession. Nurses must embrace and respond to these changes by advancing and transforming nursing education and the profession to meet the challenges of the future.

However, this transformation has contributed to increasing dissatisfaction with the profession. The end result is that fewer students are choosing nursing as a career. A shortage of nursing professionals affects access to care, quality of patient care, and clinical outcomes, and impacts the current and projected needs of the healthcare system.

The nursing work force shortage is a growing problem nationally, regionally and locally. The current supply of nurses is unable to meet the demand for many reasons. Nursing enrollment is not growing fast enough; declining social value is placed on nursing as a career; vacant positions are not filled; faculty and staff are not being retained; and nurses report job dissatisfaction, such as inadequate training, mandatory overtime, being overworked, and suffering from stress. Many nursing programs and state governments lack the resources to remedy the shortage while facing pressure to be more publicly accountable.

There are viable solutions to nursing work force challenges. Because of the increasing need for nurses, various strategies have been implemented to effectively address the need. Grantmaking is one appropriate strategy. Since 2003, the Highmark Foundation has significantly impacted nursing work force challenges with grants totaling over \$1 million to five local colleges and universities in Western and Central Pennsylvania. Approximately 5,000 nursing students, nurses, medical students, residents, first responders and nursing faculty have benefitted from Highmark Foundation funding.

Providing programs with additional resources to establish scholarships, simulation centers and different teaching modalities enhances their capacity to recruit and retain students, to increase enrollment and to graduate self-confident nurses who are prepared to enter the work force. With adequate education, training, and practice, the healthcare system should realize a better prepared nursing workforce, improved patient care and outcomes and preventable adverse events.

New and second-degree nurses surveyed reported they would seek employment and/or pursue graduate studies in Pennsylvania. This is welcome news for the state, as the goal of the grants was to recruit, retain and remain.

Background

The United States is in the midst of a nursing work force shortage that is expected to intensify as baby boomers age and the need for health care grows. Compounding the problem is that nursing schools, colleges and universities across the country are struggling to expand enrollment levels to meet the rising demand for nursing care. In 15 years [from 2005 through 2020 (projected)] approximately 800,000 registered nurse positions will be available in the United States. Considering the current outlook, there is little chance of all these positions being filled. ¹

However, indications are encouraging. Many of these positions are now likely to be filled as a result of new strategies, new thinking and new visions designed to recruit, attract and retain nurses are being implemented across states and localities. Among the new approaches are local and regional strategies based in cross-sector partnerships and supported by hospitals, foundations and state governments; collaborative use of health care technology; and appropriate use of full-time and part-time faculty.^{2,3} These efforts will require a good deal of planning, time and resources.



Contributing factors impacting the nursing shortage include: ⁴

- Enrollment in schools of nursing is not growing fast enough to meet the projected demand for nurses over the next 10 years.
- A shortage of nursing school faculty (nurse educators) is restricting nursing program enrollments and or clinical sites. Schools of nursing continue to deny high numbers of applicants each year due to increasing faculty shortage. Schools report difficulty filling vacant faculty positions and retaining senior faculty, a decrease in the number of full-time teaching faculty and an increase in the number of part-time faculty who are often not prepared for a faculty role and a large number of nursing faculty not prepared at the doctoral level. Educators without doctoral degrees may lack credibility within a university setting and have limited opportunities to receive grant funding or assume leadership positions.
- The total population of registered nurses (RNs) is growing at a slow rate. With fewer new nurses entering the profession, the average age of the RN is increasing. According to the 2004 National Sample Survey of Registered Nurses released in February 2007 by the federal Division of Nursing, the average age of the RN population in March 2004 was 46.8 years of age, up from 45.2 in 2000. The RN population under the age of 30 dropped from 9 percent of the nursing population in 2000 to 8 percent in 2004.⁵
- Job burnout, high nurse turnover and dissatisfaction are driving nurses to leave the profession which is affecting health care quality and patient outcomes. According to a national study, about one in five newly licensed nurses quits within a year. New nurses are thrown into hospitals with little direct supervision, quickly forced to juggle multiple patients and make critical decisions for the first time in their careers.⁶

Current Projected Shortage Indicators: ⁷

- The shortage of registered nurses in the United States could reach as high as 500,000 by 2025. The demand for RNs is expected to grow by 2 percent to 3 percent each year.
- Approximately 30,000 additional nurses should be graduated annually to meet the nation's health care needs, an expansion of 30 percent over the current number of annual nurse graduates.
- More than 1 million new and replacement nurses will be needed by 2016 (a 23.5 percent increase), making nursing the nation's top profession in terms of projected growth.
- Based on findings from a Nursing Management Aging Workforce survey, 55 percent of surveyed nurses reported their intention to retire between 2011 and 2020. The majority surveyed were nurse managers.
- Changing demographics signal a need for more nurses affecting access to care for an aging population.

Strategies to Address the Nursing Shortage:

Many statewide initiatives are under way to address the shortage of RNs and nurse educators. These initiatives include creating statewide nursing task forces to address the challenges of increasing the nursing work force, accelerated nursing programs, scholarship funds to assist with tuition, developing more public-private partnerships, federal grant-funded programs, creating healthy work environments, expanding the use of technology and increasing the roles of advance practice nurses given their increased use as primary care providers.



Impact of Nursing Shortage in Pennsylvania:

The nursing shortage in Pennsylvania mirrors a national shortfall, including overworked, burned out and dissatisfied nurses, delays in delivery of patient care, decrease in nursing recruitment and retention, faculty shortages, insufficient funding for nursing programs and advancing age of nurses. Pennsylvania ranked 24th in the lowest number of registered nurses per capita. Additionally, findings released of two nursing shortage studies completed by the Pennsylvania Center for Health Careers in 2006 projected that the shortage of RNs (in Pennsylvania) could reach 16,000 by 2010, and the shortage of licensed practical nurses (LPNs) could reach 4,100 in four years.⁸

The nursing shortage experienced throughout the state of Pennsylvania is severe, affecting not only the quality of health care throughout the state, but also driving up the cost of healthcare in general.⁹ According to the Health Resources and Services Administration (HRSA), in the long-term, Pennsylvania health care providers will experience a 41 percent vacancy rate in nursing positions by the year 2020, requiring more than 54,000 nurses to provide adequate patient care.¹⁰

One indicator of RN job/career satisfaction is the intent to remain in nursing. Of 148,152 registered nurses responding to a licensure renewal survey conducted by the Pennsylvania Department of Health in 2004 and 2005 (reported in 2006),¹¹ 79.7 percent (118,055) were employed in healthcare, with 85 percent (96,893) employed in Pennsylvania. From the survey, 46 percent of RNs employed in health care indicated that they would be likely to leave nursing within the next 5 to 10 years. Nurses with fewer than five years (24 percent) in the field indicated they would be more likely to leave nursing. This group also expressed the highest level of dissatisfaction (34 percent) with their jobs. Each of these reasons will affect the nursing work force, subsequently impacting access to care and health care delivery.¹²

The nursing shortage in Pennsylvania is being addressed through such comprehensive approaches as universities, colleges and schools of nursing collaborating or partnering with local foundations to gain funding; accelerated nursing degree programs; promoting diverse career paths; new and/or expanded roles for nurse practitioners; use of simulation technology; payment for continuing education; private and public incentives for recruitment and retention made available to individuals (educational scholarships; forgivable loans; in-kind use of facilities, faculty and computers); or cash grants or loans to institutions.

In 2006, Gov. Ed Rendell agreed to invest \$41 million in activities designed to alleviate the statewide nursing shortage. The funding, including \$10 million from the state and \$31 million from the Pennsylvania Higher Education Foundation (PHEF), will be used to provide incentives for hospitals to allow qualified RNs to serve as nurse faculty in an effort to boost educational capacity and enrollment at state nursing programs. The funding will also help expand nursing programs by creating new clinical education opportunities and providing planning grants to universities. PHEF also awarded \$550,000 in grants to local hospitals and 11 nursing schools across the state in 2006 to fund nurse educator salaries, scholarships and loan forgiveness.

Gov. Rendell also proposed to lower health care costs by allowing certified registered nurse practitioners (CRNPs) to practice to the full extent of their education and training. A CRNP, while functioning in the expanded role of a professional nurse, would practice within the scope of practice of the particular clinical specialty in which the nurse is certified. A CRNP would perform acts of medical diagnosis and make referrals in collaboration with a physician and in accordance with Pennsylvania regulations.¹³ Extensive patient education and case management and counseling skills of nurse practitioners allow them to provide holistic, primary and preventive care to patients. The governor plans to increase access to nurse practitioner care and support expansion of nurse-managed health centers and federally qualified health centers in underserved areas.¹⁴



Highmark Foundation’s Approach to Addressing the Nursing Shortage:

The Highmark Foundation is aware of the issues facing the future of nursing in Pennsylvania. Through grant support, the Foundation has demonstrated its commitment to developing and sustaining partnerships with local nursing programs, thereby, enabling these programs to increase the quantity and improve the quality of trained nurses.

Since 2000, the Highmark Foundation has awarded five nursing schools with grants totaling \$1 million to support initiatives such as accelerated nursing programs, recruitment, retention, scholarships, technology and simulation education. The following table shows grants to nursing programs across the state of Pennsylvania. The overall goal of these grants is to provide opportunities for nursing programs to recruit and retain trained nurses who will remain in Pennsylvania after graduation.

Highmark Foundation Grants to Pennsylvania Nursing Programs

Grantee	Amount	Purpose	Geographic Area	Status
Duquesne University School of Nursing	\$125,000	Accelerated Nursing Second Degree Program, a one-year nursing program	Western PA	Closed (2003-2004)
Edinboro University of Pennsylvania	\$55,000	Development of the Innovative Accelerated Nursing Program	Western PA	Closed (2004-2005)
Pennsylvania State University – The Behrend College	\$200,000/ over three years	Development of a Simulation Center	Northwestern PA	Active 2007-2010
Pennsylvania Higher Education Foundation	\$150,000/ over three years	Nursing scholarships for undergraduate students at five PA colleges/universities	Central and Western PA	Active 2006-2009
Western Pennsylvania Hospital School of Nursing	\$500,000	Establish a medical simulation center at the School of Nursing	Western PA	Active 2007-2008 <i>(extended into 2009 in order to expend remaining grant funds)</i>

Highmark Foundation Grant Outcomes:

Outcomes from the five nursing programs funded by the Highmark Foundation are highlighted below. Grants have made and continue to make a significant impact on nursing issues in Pennsylvania. A majority of new and/or second degree nurses indicated they would join the nursing work force or pursue graduate studies in Pennsylvania, which will help to reduce the growing nursing shortage.

1. Duquesne University: The Second Degree Accelerated Nursing Program was designed in 2003 for the non-nurse with a previous baccalaureate degree who is seeking a BSN (baccalaureate degree in nursing). Highmark Foundation funds also were used to purchase a “Sim Man” computerized (simulator) mannequin, which was used as a teaching and learning tool.

Goals: The goals were to graduate 30 new nurses by 2004, strengthen linkages with participating clinical agencies, design processes for use of personal digital assistants in clinical education and implement technological approaches to student outcomes.

Outcomes: In August 2005, 32 students graduated from the Second Degree Program, of which 29 (90 percent) remained in the region working in local hospitals. These students comprised the original group accepted into the program. All 32 passed the National Council Licensure Examination (NCLEX). In the fall of 2005, 45 students graduated, of which 83 percent (37) planned to seek employment in the region.

Update: Since the grant was awarded in 2003, outcomes are as follows:

- 225 students have enrolled in the Second Degree program
- 220 students were retained
- 182 graduated (81 percent)
- 15 students received scholarships
- 50 students remained in Pennsylvania (estimated)
- More than 300 students annually are trained using simulation technology (Sim Man)

2. Edinboro University of Pennsylvania: During the 2003-2004 academic year, the Highmark Foundation supported the Innovative Nursing Scholarship Award, Recruitment Program and the Technology Initiative, to assist the university with increasing the diversity of nursing students. Funds for the Recruitment Program were used to support the university’s efforts to recruit more nontraditional and minority students into the Innovative Nursing Program, a 15-month accelerated curriculum for students seeking to earn a Bachelor of Science in Nursing (BSN) after having earned a previous baccalaureate degree. The technology initiative supported students that required financial assistance with technology and/or communication needs (including computers, hardware/software, modems and other devices). Two laptop computers and an LCD projector were also purchased for students to borrow to assist them with research, teaching assignments and preparation for the NCLEX. Practice software from the exam was installed on five computers and made available to students even after graduation. A video was also developed for use as a recruitment tool. This assistance aided students in their academic and clinic studies, in addition to providing options for teaching and learning.

Goal: The goal was to increase the diversity of students by offering tuition and assistance with associated fees to nontraditional students.

Outcomes: The program actually began in 1990 with 10 students. At the conclusion of the grant (2004), 30 students had been admitted into the program. Thirteen (13 or 43 percent) students benefited from the scholarship awards. Scholarships ranged from \$450 to \$10,000. Of the 13, 12 (92 percent) graduated and accepted positions as graduate nurses (one withdrew due to serious illness).

Updates: The nursing department sends surveys to graduates at one year and three years; response is voluntary. As a result, the department only has information for those who return the survey.

- Of the 12 graduates, seven (58 percent) are currently licensed in Pennsylvania, one is currently licensed in Maryland, another's license expired in October 2008, and one is currently enrolled in an MSN (Master of Nursing) program to become a family nurse practitioner. There are three students for which information is not available.
- The laptop computers purchased in 2004 have limited applications related to 2009 technology. However, students use them for word processing, creating PowerPoint presentations and patient teaching projects.
- With the LCD projector, instructors are able to use technology to demonstrate assessment and fundamental skills..
- The NCLEX software, which was made available to students proved to be an effective investment. The 2004 graduates from the Innovative Nursing Program had a first time NCLEX pass rate of 83 percent, compared to the four-year traditional graduates who had a 73 percent pass rate.
- The recruitment video is used to help recruit nursing students into Edinboro University's nursing programs. The video includes conversations with current students, interviews with faculty and scenes of classes in session. The video is used at open houses as well as career fairs and high school presentations.
- The Innovative nursing students' graduation rate is higher overall (83 percent) than the graduation rate of traditional nursing students (79.86 percent).



3. Pennsylvania State University – The Behrend College: In response to the critical shortage of professionals in the field of nursing, Penn State Behrend established two new nursing programs: The Associate Degree in Nursing Program (AS) was established in the fall of 2007 and has 90 students as of fall 2008. The baccalaureate curriculum in nursing (RN to BSN) was added in 2008. This program allows the AS graduates and other RNs to progress academically to achieve the BSN. The current enrollment in the RN to BSN program is 20 students and is expected to double by the fall of 2009. Because these are new programs, there have not been any nurses who have graduated. Anticipated graduation for the AS class is during 2009.

The Nursing Technology Laboratory and Simulation Center was established to train nursing students and extend its use to the health care community of Northwest Pennsylvania through innovative technology in combination with traditional nursing curriculum. The center is open for community use to first responders [paraprofessionals] such as emergency medical technicians and paramedics during weekends, evenings and summer semester breaks.

Goals: The goals of the new nursing programs are to train and graduate nurses who will seek employment or pursue graduate studies in Pennsylvania. The goals of the lab and Sim Center are to expand its capacity to educate and develop collaborative relations with other health care partners in the region, increase its capacity to educate and train future nurses (AS, RN, and BSN), enhance skill development in seasoned professionals, develop competencies in the delivery of nursing care and impact the nursing shortage in the region. With simulation, nurses can be trained more effectively and efficiently leading to greater confidence in skills and abilities, less attrition, enhanced learning, reduced stress, better patient care and increased job satisfaction.

Outcomes: This is a new grant. The use of the Sim Center and Nursing Lab will vary according to need. The community partnership remains active, with Saint Vincent Health System and Energycare utilizing the lab and Sim Center. From 2007 through 2008, training included paramedic classes for 10-15 students, crisis resource management for 26 RNs, clinical judgment assessments for 35 new graduate nurses and orientation for 10 emergency physician residents. It is projected that throughout its nursing programs, approximately 100 associate degree and 75 RN to BSN students would use the lab and Sim Center annually. It is projected that 600 nurses enrolled in various educational programs throughout Hamot Hospital and Saint Vincent Health System in addition to 320 first responders could also use the center annually.

4. Pennsylvania Higher Education Foundation (PHEF): PHEF established the Pennsylvania Nursing Assistance Fund to provide scholarships to undergraduate nursing students. The scholarships support students formally enrolled in programs that lead to a LPN, RN or BSN at a qualifying Pennsylvania institution. The total disbursed per year is \$62,500. Each school receives \$12,500. With grant support from the Highmark Foundation (\$50,000 per year) and PHEF's match of \$12,500 (25%) per year for three years, a total of \$187,500 in new funding was made available to five nursing schools in Western and Central Pennsylvania to assist disadvantaged nursing students with staying in school and assisting others toward graduation. The five schools selected by the Highmark Foundation are: Bloomsburg University, Chatham University, Clarion University, Millersville University and Mount Aloysius College.

Goals: The scholarships are designed to assist students unable to afford the cost of tuition by alleviating the financial burden of tuition and other educational costs (such as books, supplies for clinical rotations, textbooks and NCLEX testing fees); to increase the number of disadvantaged students who will be qualified to pursue a career in nursing upon graduation; and to retain nursing students by improving graduation rates of qualified students who are enrolled in ASN, BSN and MSN degreed programs.

Outcomes: From 2006 through December 2008, a total of 130 scholarships have been awarded to students enrolled in the five nursing programs. Of those that have graduated or are scheduled to graduate, 95 percent indicated they would remain in Pennsylvania to either pursue a nursing career or a graduate nursing degree. Several students are already employed part time at local hospitals.

Update: Since 2006, approximately 45 students have graduated. Although the awarding of scholarships is important, many of these students received on average \$2,500, which enabled them to graduate and work in Pennsylvania or to continue studies so that they may graduate.

5. Western Pennsylvania Hospital School of Nursing: The Simulation, Teaching and Academic Research Center (STAR) at West Penn Allegheny Health System was established within The Western Pennsylvania Hospital School of Nursing in 2007 to improve medical/nursing education and patient safety. It serves all of West Penn Allegheny Health System. The Center, housed at the West Penn Hospital School of Nursing, is an example of a partnership model. Partners include all West Penn Allegheny Health System hospitals and health science departments.

Goal: STAR is designed to improve competencies of health care professionals and students, positively impact patient care, retain nursing and medical school students and faculty and reduce the incidence of preventable adverse events and stress-related errors.

Outcomes: Nursing education began in the STAR Center in January 2008. The total of new registered nurses hired in the West Penn Hospital system from January 1, 2008 through August 31, 2008 was 91, with 11 resignations (12 percent) from those 91 nurses. Typically, the dropout rate is high for new nurses. After working in the profession for a few weeks or months, some new nurses feel overwhelmed or uncertain about their duties and responsibilities, finding the transition from nursing school to work to be difficult.

Approximately 20 education courses have been developed. Since 2007, approximately 4,500 nurses, medical students, nursing students, allied health professionals and ancillary personnel have been trained using simulation education, including a simulated ambulance for training pre-hospital (first responders) personnel and a simulated family birthing center. Outcomes from participant and instructor pre- and post-evaluations indicated satisfaction with simulation learning and self-confidence in learning, in addition to transference of knowledge from a simulated clinical setting to the actual hospital experience.



The Future of Nursing: Next Steps

Although grant funding to assist colleges and universities in training, retaining and graduating nurses is helping to reduce the nursing shortage, there are still gaps such as insufficient nursing faculty, an aging nursing work force, lack of self-confidence among new nurses, financial barriers and salary ranges below the national average (\$56,242), which could affect the future of nursing. Until these gaps are closed, the nursing shortage will continue to grow. However, several recommendations have been proposed to close the gaps and increase the nursing work force, thereby improving the future of nursing nationally and in Pennsylvania. The long-term goal is to increase the number of graduates from nursing programs who successfully obtain licensure, upgrade their skills and practice nursing in Pennsylvania.¹⁵

Several recommendations have been identified to preserve the future of nursing to ensure that the supply meets the demand. These recommendations are a step toward addressing the problem and the long-term future of nursing. These trends will advance nursing into the next generation.¹⁶

■ **Technology** that is revolutionizing the design, delivery and evaluation of nursing education in:

- Web-based courses, distance learning and hand-held electronic devices (PDAs) to provide more student learning opportunities, and to create innovative teaching practices, as a means to prepare competent nurse professionals. Advantages are that faculty members are afforded multiple alternative worksites and universities are provided with a wider student audience at lower cost.¹⁷
- Centralized simulation centers that prompt unified practices and resource accessibility. Nursing programs that have neither space nor funds for high-fidelity equipment can provide simulation experience to students through participation in shared simulation centers. One school funds and builds a high-fidelity simulation center and invites neighboring schools, hospitals and community allied professionals to participate. This partnership model is the simplest and most common method of sharing simulation equipment among schools or hospitals through a single shared facility.¹⁸ Future redesign or reorganization of medical education programs will include simulation.¹⁹ Although simulation bridges the gap between theory and practice, the long-term impact of simulation on learning outcomes has yet to be determined, although short-term outcomes are promising.²⁰

■ **Nursing Education Options** prompted by colleges and universities to accommodate students at various stages of life. Students may be recent high school graduates, second-degree seekers, individuals changing careers or nurses pursuing career advancement opportunities. Accelerated nursing programs are becoming more popular as a way to address the nursing shortage in a timely manner. These programs give students credit for prior completion of general education requirements and enable students to complete a BSN in two years or less. Graduates are prepared as entry-level positions and staff nurses following successful completion of the NCLEX-RN exam.²¹

- **Mentoring Programs** currently are being implemented in several states. Many hospitals are trying to create safety nets with nursing residency training programs. Some hospitals have established their own programs to help new nurses make the transition. Often, new nurses are assigned to more experienced nurses, whom they shadow for a few weeks or months while they learn the system. More hospitals are investing in longer, more thorough residencies, which can cost approximately \$5,000 per resident. Although the cost may seem steep, the cost of recruiting and training a replacement nurse who leaves the profession is about \$50,000.²²

One national program is the Versant RN Residency, which was developed at Childrens Hospital Los Angeles. Since 2004, the program has spread to more than 70 other hospitals nationwide. Of those, Baptist Health of South Florida in the Miami area, reports reducing its turnover rate from 22 percent to 10 percent in the 18 months since it started the program. Besides the residency's professional guidance, which includes classroom instruction, new nurses also receive personal support from mentors.

The American Association of Colleges of Nursing and the University HealthSystem Consortium partnered in 2002 to create a nurse residency program primarily for hospitals affiliated with universities. Fifty-two (52) sites now participate in the yearlong program, and the average turnover rate for new nurses was 6 percent in 2007.

Additionally, the Internet has opened up numerous avenues for supporting long-distance mentoring. Pairing junior faculty with experienced, accessible mentors is one way to help to ensure a satisfying academic career, and it may help solve the faculty shortage. Faculty can link electronically using e-mail, teleconferencing and videoconferencing, or by using chat sites, blogs or message boards. Collaborating on electronic projects or research is an example of mentoring via telecommunications devices. Technology can facilitate the sharing of experienced mentors between universities and colleges with similar interests or teaching missions.²³

- National funders have also supported evidence-based strategies to retain nurses. In 2006, the Robert Wood Johnson Foundation commissioned the development of a white paper, "Wisdom at Work: The Importance of the Older and Experienced Nurse in the Workplace" to identify promising strategies and opportunities for retaining experienced nurses. From the white paper, a number of promising interventions were identified. The Wisdom at Work program supported 18 evaluative research projects of up to \$75,000 each for an 18-month period to determine the impact and outcomes of existing interventions aimed at retaining experienced nurses in hospitals.²⁴
- **Nursing Faculty Shortages** at nursing schools are limiting student capacity at a time when the need for professional RNs continues to grow. The faculty vacancy rate exceeds 12 percent in nursing programs across the country. To minimize the impact of faculty shortages, the American Association of Colleges of Nursing (AACN) is leveraging its resources to secure federal funding for faculty development programs, collect data on faculty vacancy rates, identify strategies to address the shortage, and focus media attention on this important issue.²⁵

Shaping the Future through Change

In 2001, the Institute of Medicine released a study, “Crossing the Quality Chasm: A New Health System for the 21st Century,” which identified 10 domains or areas of focus to bring about positive changes for the future of nursing. The 10 domains are:²⁶

1. **Leadership and Planning** through unified and systematic planning driven by reliable data/evidence and implemented within the nursing community and among other health professionals.
2. **Economic Value** by designing a model for reimbursement of nursing services, developing new and increasing existing resources to support nursing education and devising innovative compensation packages designed to recruit and retain registered nurses.
3. **Delivery Systems/Nursing Models** influenced by stable funding streams to support the design, implementation and evaluation of new, creative, integrated and/or interdisciplinary practice models.
4. **Work Environment**, which fosters nurses’ participation in decision-making at all levels of the organization develops and disseminates reliable systems based on scientific evidence that guides staffing and resource allocation.
5. **Legislation/Regulation/Policy** through cultivation and identification of existing databases that begin developing work force and patient outcome databases that are shared and used for policymaking. Databases use reliable data to support health policy formulation and collaboration with stakeholders for developing public policy.
6. **Public Relations/Communication** to effectively communicate nurses’ impact on quality of care and health outcomes using a primary source/repository for data/information developed by nursing organizations that demonstrates the positive impact of nursing on quality care.
7. **Nursing/Professional Culture** established through certification as a professional benchmark. Asserting nursing’s high standards of professional practice, education, leadership and collaboration will enhance professionalism, image, and career satisfaction.
8. **Education** to redefine the scopes of nursing practice and the educational preparation for each scope of practice to meet the general and specialized health care needs of society, and establish standards for the educational preparation of nurses for roles as nurse educators in academic and practice settings.
9. **Recruitment/Retention** by recruiting retired nurses to form the foundation of a professional mentoring corps, and address diversity issues by: obtaining funding to support an increase in minority enrollment, identifying specific mobility tracks and creating a specific curriculum to address diversity.
10. **Diversity** through creation of cultural competence initiatives through educational programs and standards in the workplace, mentoring diverse students to prepare for leadership positions, increasing diversity of faculty, and targeting legislation and funding for diversity initiatives.

Each of these 10 domains requires coordinated effort from many stakeholders to ensure that nursing successfully advances into the future. These areas of focus are important to the longevity of nursing as a profession; and could ensure that nursing continues to enhance quality of care, improve patient outcomes and reduce health care costs.

Summary

Nurses are an essential component of the health care system. Resolving the nursing shortage in Pennsylvania [and nationally] is, indeed, challenging and cannot happen in isolation or in a vacuum. Successful resolution will require collaboration of many different groups, including policymakers, private and public funders, universities, nursing faculty and nursing programs. Best practices such as innovative mentoring and residency programs for new nurses and faculty have shown promise in graduating confident and competent nurses prepared to enter and remain in the nursing work force.

The Highmark Foundation has used grantmaking to impact the nursing shortage in Pennsylvania, and it will continue to support nursing programs that make a significant difference in increasing nursing staff and faculty. The Foundation's ability to improve the quality and quantity of nurses in the future will require more comprehensive long-term strategies. The Highmark Foundation has become a leader in funding/supporting best practices around accelerated nursing programs that provide nursing scholarships for disadvantaged and nontraditional students, and the creation of technology designed to ensure that barriers are reduced or eliminated in order for graduate nurses to continue their studies or remain in Pennsylvania after graduation.



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