The American Organization of Nurse Executives estimates the country will be short 1 million nurses by 2015. But the healthcare crisis is not restricted to a shortage of nurses. There is a national shortage of healthcare providers in every profession, including medical doctors trained in critical care, respiratory care providers, and...
A PERFECT STORM IN HEALTHCARE

The nation’s complex healthcare system is under severe stress from environmental, social, and economic forces.

pharmacists. There is also a shortage of faculty to enlarge the numbers of graduates. At the same time, new regulations limiting hours for residents have made it more difficult to provide coverage in surgical and critical care units.

2. Changes in Medicine: Genetic discoveries are identifying tailored therapies for some illnesses, while new medicines, advances in radiology, and minimally invasive surgeries all change how healthcare is delivered.

3. Economic Changes: Currently, the healthcare system focuses on intervention rather than more cost-effective prevention. In 2003, national healthcare expenditures in the United States totaled $1.7 trillion or approximately 15 percent of the gross national product—more per capita than any other country. And, despite the amount of money we spend on healthcare, an estimated 17 percent of Americans younger than 65 do not have health insurance, and about 60 percent of healthcare organizations are operating without a bottom line. The United States and South Africa are the only countries in the developed world that do not provide healthcare for all their citizens. Further, the United States ranks 37th in quality of care, 29th in lifespan, and has the seventh highest infant mortality rate of the 30 most industrialized countries.

4. A Change in Patients: Aging baby boomers ready to crowd the healthcare market are driving changes, not just with their numbers, but also with their level of knowledge and their attitudes about healthcare delivery. Armed with knowledge and data from the Internet, they want to be partners in healthcare—they don’t want anyone telling them what to do, they want to have choices, and they want control. Furthermore, when the uninsured 17 percent of those aging baby boomers become eligible for Medicare, they may use more healthcare resources because of healthcare that was delayed at earlier ages.

5. Advances in Technology: Technology is changing the way patients access healthcare information and impacting the way healthcare professionals practice. The rapid availability of information to the general public, good and bad, on disease and management also has had a major impact.

ARE WE PREPARED?

The hypothetical healthcare hurricane can still be averted. Programs and initiatives at the School may contribute to a “butterfly effect,” or any small change in the initial condition of a dynamic system, which causes a chain of events leading to large variations in the long-term behavior of the system.

Technology—along with highly skilled nurses trained in advanced practice specialties, evidence-based practice, healthcare informatics, and leadership—is already making a difference in healthcare delivery and outcomes.

ADVANCED PRACTICE NURSES

As the number of general practice physicians and physicians trained to provide critical care decreases across the country, nurse practitioners increasingly fill the void, caring for patients in a variety of settings, including nurse-managed primary care centers in more than 250 nationwide locations.

“The culture of healthcare has changed,” says Donna Nativio, PhD, CRNP, FAAN, associate professor in the Department of Health Promotion and Development and director of the family/adult and pediatric nurse practitioner
programs at the School of Nursing. “The traditional professional sovereignty of physicians has evolved into interdisciplinary teamwork as a care delivery model.” Part of that change has been the recognition that clinical nurse specialists and advanced practice nurses not only provide effective and safe patient care, but also fill the growing gap between doctors and patients.

Advanced practice nurses offer an extended array of healthcare services, including primary and preventive care by nurse practitioners in clinical areas such as pediatrics, family health, women's health, and gerontological care. Advanced practice nurses also provide care as certified nurse anesthetists and in cardiac, oncology, neonatal, neurological, and obstetric/gynecological nursing as well as other advanced clinical specialties.

In the hospital, advanced practice nurses increasingly make treatment decisions based on data from lab tests and assessments. Nurses determine the course of medication and therapy for their patients. They make critical choices about new technology and how best to use it. Research supports the merit of this changing paradigm. In a study funded by the National Institutes of Health, Leslie A. Hoffman, PhD, RN, FAAN, professor and chair of the Department of Acute and Tertiary Care, showed that outcomes were equivalent between advanced care nurse practitioners and house staff who managed patient care in a medical intensive care unit. And a 2000 study in the Journal of the American Medical Association concluded that patients who receive primary care from nurse practitioners have comparable outcomes and satisfaction levels as those treated by doctors.

Clinical nurse specialists also have increased roles. Responsibility for one unit or one patient population has expanded to system issues. These changes have facilitated greater nursing input into system decisions and increased opportunities for clinical nurse specialists to have an impact on patient care outcomes.

“In the future, expert clinicians will share responsibility and deliver healthcare that is appropriate and safe,” Nativio says.

**DOCTOR OF NURSING PRACTICE (DNP)**

The new Doctor of Nursing Practice (DNP) program will further advance the profession of nursing by providing an educational option for clinical nurses who wish to move ahead, and better reflects the level of responsibility and training for advanced practice nurses. The DNP positions nurse practitioners as highly skilled clinicians who can advocate for healthcare, influence patient care and healthcare delivery as patient advocates, and have an input on policy and ethics. The School of Nursing began accepting full- and part-time students for the DNP program beginning this fall. Pitt's DNP program is the first to be offered in Pennsylvania.

An alternative to more traditional research-based (PhD) doctoral programs, the University of Pittsburgh’s DNP has a core curriculum that combines a patient and systems knowledge base with evidence-based practice. A 2005 report from the National Academy of Sciences called for nursing to develop a nonresearch clinical doctorate to prepare expert practitioners who also can serve as clinical faculty.
NURSING LEADERSHIP

Skilled nursing leaders are another force that can help mitigate the impending healthcare crisis by influencing transformational changes. “A transformational leader needs to know how to influence, change, and motivate people,” Wolf says. “Any leader can take people where they want to go, but a transformational leader takes people where they need to be. That’s an art! That’s strategic leadership.”

In order to influence a clinical discipline effectively, a leader needs to understand that discipline. “If we don’t develop nursing leaders to teach the art of leading a clinical discipline, we’ll end up being led by leaders from other disciplines such as accounting or business,” Wolf says. “And if that happens, the role of nursing will begin to be looked at more as a task-oriented, production-line piece by people who do not really understand or appreciate what nurses do—they just see the task work.”

TECHNOLOGY

As information technology and advances in medical technology impact how care is delivered, healthcare providers will be increasingly dependent on technology to achieve safe patient care that is provided with measurable quality. Nurses are the link between technology and touch.

Researchers at the School of Nursing are developing technology solutions to assist caregivers as well as improve outcomes and quality of life for patients. Studies include the use of handheld pocket computers to promote adherence, communication devices for nonspeaking intensive care unit patients, robotic assistance for the elderly, and healthcare informatics and computer training modules to support evidence-based practice.

In the classroom, technology is used to enhance the academic goals of the School of Nursing. Using learning and instructional theory, classroom designs and technology solutions are developed to meet the educational needs of both faculty and students. “Not just their stated needs, but educational needs they may not even be aware of,” says Peter Draus, EdD, director of the Learning Resources Center and assistant professor in the Department of Health and Community Systems.

In addition, the School is a leader in simulation training. John O’Donnell, MSN, RN, director and instuctor in the nurse anesthesia program, is studying the impact of simulation training in catheter insertion performance, and how skills learned in simulation translate to clinical practice.

THE BUTTERFLY EFFECT

With more than four times as many RNs in the United States as physicians, and an aging population that’s growing faster than at any other time in history, nurses are shaping the future of healthcare in ways that could not have been imagined even a decade ago. As healthcare planners begin to define the work of the future, and the roles needed to do that work, the School of Nursing will continue to add new programs and adapt existing programs to educate nurses to fill those changing roles and effect positive changes in healthcare.

If, as weather forecasters hypothesize, a butterfly flapping its wings in Tokyo, Japan, could cause tornadoes in California, imagine what highly skilled nurses can do to divert a storm—perfect or imperfect—in healthcare.

A perfect storm is ... a coming together of singly innocuous events—a coincidental mix of just the right things with just the right timing to create a disastrous outcome.
The University of Pittsburgh School of Nursing graduates approximately 350 nurses each year, including baccalaureate (BSN), RN to BSN, accelerated second degree, master’s, and doctoral students. Additionally, the School’s Fast Track Back program enables registered nurses without recent clinical experience to move back into the profession, while continuing education programs at the School help keep practicing nurses current with the latest information and technology.

The School also is addressing the nursing shortages with master’s and doctoral programs that prepare nurse educators to teach the next generation of nurses. And, in response to a demand for more nurses with advanced clinical skills, the school has added several programs, including clinical nurse leader, and the Doctor of Nursing Practice, the terminal degree for advanced practice and nursing leadership roles. The School is planning to add neonatal nurse practitioner and acute care pediatric nurse practitioner programs.
An effective response to the nursing shortage requires highly skilled nurses and a commitment to nursing education.

But an effective response to the nursing shortage requires more than adding numbers of nurses to the system. It requires highly skilled nurses who are prepared to practice in multidisciplinary teams and in an increasingly complex healthcare environment. Today's nurses require not only high levels of skills and critical thinking; they also need to know how to access, analyze, and apply the latest information as it becomes available.

THE CASE FOR BACCALAUREATE EDUCATION

Readers of this magazine already appreciate the value of BSN education for nurses. A growing body of evidence shows BSN graduates bring unique skills to their work as nursing clinicians and contribute to safe patient care. A study published in the September 24, 2003, issue of the *Journal of the American Medical Association* reports a clear link between higher levels of nursing education and better patient outcomes. The report concludes that increasing the percentage of nurses educated at the baccalaureate level can decrease mortality rates for surgical patients and patients who develop complications.

While advances in scientific knowledge and new technologies have improved patient outcomes, they also have changed how healthcare is delivered. As a result, nursing today is becoming increasingly complex and challenging. Nurses need to be better educated than ever before so they are able to gather, analyze, evaluate, and apply the most current information for improved patient care and outcomes. In response to these changes and reports linking improved patient outcomes and safety to nursing education levels, the American Organization of Nurse Executives, the American Association of Colleges of Nursing, and the Global Alliance on Nursing Education have all issued statements in support of baccalaureate education.

The groups concur that education has a direct impact on the skills and competencies of a nurse clinician that leads to better care and improved patient safety and outcomes.

WHY A BSN FROM PITT?

The School of Nursing is meeting the challenges of nursing head on, preparing students to face the demands required of them: to provide care and comfort to patients, make decisions based on data from lab tests and monitor technology, collaborate with other healthcare professionals, and teach patients and their families how to take care of themselves and maintain their health. Pitt nurses are valued for their critical thinking, leadership, collaboration, case management, and health promotion skills across a variety of healthcare settings.

Simulation training and evidence-based practice (EBP) are incorporated at all levels of the curriculum to prepare students with the necessary knowledge and skills to support best practice. Both of these programs were featured in the summer ’05 issue of *Pitt Nurse*. 
Healthcare informatics and nursing research are introduced in the freshman year to support EBP, provide students with the tools and skills they need to access and evaluate the latest research literature, and then apply that information wisely and systematically.

Baccalaureate training at the School of Nursing prepares nurses with the necessary skills and knowledge to meet the demands of a changing healthcare environment. Pitt nurses are prepared not only with a list of facts, but with the capability to evaluate and synthesize new information, the ability to adapt to an ever-changing environment, and the willingness to continue education as knowledge expands and delivery systems develop and evolve.

**RN OPTIONS**

RN to BSN and RN to MSN options at the School provide registered nurses who have a degree or a diploma from a two-year program a convenient and affordable way to earn a BSN and/or master’s (MSN) degree from one of the nation’s outstanding schools of nursing. The RN to MSN program is a bridge curriculum to graduate school.

The result of both RN Options programs is a high-quality, personalized educational experience for the students and more highly trained nurses in the workforce in less time.

**THE SECOND DEGREE ACCELERATED PROGRAM MOVES MORE NURSES INTO PRACTICE**

Individuals who already have an undergraduate degree in a discipline other than nursing can switch to a career in nursing through the School’s Accelerated Second Degree BSN program. This intensive, fast-paced program builds on a student’s previous education and science prerequisites to offer the nursing content necessary to enable students to earn a BSN degree within three terms of full-time study. Within one (very intense) year, the students function as nurses—Pitt nurses!

The School’s first class of accelerated second degree students graduated in August 2005 and had a 100 percent first-time pass rate on the National Council Licensure Examination. Current students entered this program from a variety of fields, including psychology, biology, business, anthropology, music, engineering, and sports medicine—and some have master’s and PhD degrees in other disciplines. Their ages range from 20s to 50s. “Their reasons for pursuing a BSN are personal and as varied as their backgrounds,” says Eileen Chasens, DSN, RN, assistant professor in the Department of Health and Community Systems and coordinator of the Accelerated Second Degree BSN program. “The broad knowledge and expertise they bring to the program adds to their depth.”

The Accelerated Second Degree BSN program puts more Pitt nurses in the workforce.

**FAST TRACK BACK GETS NURSES BACK IN THE WORKFORCE**

The Fast Track Back: Re-entry to Practice for Registered Nurse program helps move more, better prepared nurses back into the workforce. Directed to registered nurses without recent clinical experience, this intense five-week program is offered to registered nurses at the Oakland and Johnstown campuses. Lectures are given at the Oakland campus and simultaneously videoconferenced to the Johnstown campus, so nurses on the Johnstown campus receive the same classroom content at the same time as students on the Oakland campus. Johnstown nurses are only required to come to Oakland twice, for human simulation learning experiences at the Peter M. Winter Institute for Simulation, Education, and Research.

Clinical hours and time in the simulation lab help students refresh their physical assessment skills, but the program is much more than a skills refresher course! Nurses also are updated on HIPAA regulations, pharmacology, ethics, nursing theory, and best practice. They also learn how to delegate and work in an interdisciplinary team. At the conclusion of the program, nurses are prepared to begin their hospital orientation and resume their nursing careers.

The next Fast Track Back program begins on October 4, 2006.

**CONTINUING EDUCATION**

Continuing education programs at the School help keep practicing nurses current with the latest information and technology.

The School has been a pioneer in continuing education. Two years after it was established in 1939, the School held the first nursing continuing education workshop in the United States. The 1941 summer workshop in nursing education provided teachers and supervisors in nursing schools individual and group work in curriculum construction, evaluation, guidance and methods in nursing sciences, nursing arts, mental hygiene, and medical and surgical nursing.

Today, the School of Nursing continues to be a leader in continuing education with programs that anticipate and address contemporary issues within healthcare and nursing. The School provides a variety of educational offerings throughout the year to enhance and advance the knowledge of nurses, enabling them to put the latest advances in patient care into practice.
Pennsylvania is in the process of enacting a bill mandating continuing education for nurses. The bill will take effect one year after it is signed by the governor. Currently, 27 other states have mandatory continuing education, and nursing is the only health profession in Pennsylvania that does not already mandate some sort of continuing education.

“Nursing knowledge doesn’t stop at graduation,” says Rosemary Hoffmann, PhD, MSN, RN, instructor in the Department of Acute and Tertiary Care. “The nursing profession changes daily, so you need to continue to learn.”

EDUCATING MASTER’S PREPARED NURSES

Ranked among the top 10 programs in the country, the School of Nursing master’s (MSN) program features a wide variety of options to prepare students for advanced practice nursing or advanced specialty roles. Approximately 300 students are enrolled in the School’s master’s programs on a full- or part-time basis. Areas of study range from a clinical focus, including nurse anesthesia, nurse practitioners, and clinical specialists, to concentrations in informatics, clinical research, education, and administration. Students also can choose from a variety of dual majors, minors, and post-master’s certificate options.

Each of the programs focuses on developing the skill sets that increase the expertise and marketability of advanced practice nurses, and much of the course work can be completed online or through distance learning. The program is flexible enough to keep pace with the changing demands of the nursing profession and healthcare systems as well as the needs of the students.

Graduates serve the profession in a broad array of institutional, community, and business settings, including clinical practice, information systems, clinical

EVIDENCE-BASED PRACTICE

As the knowledge base for healthcare expands, nurses need to access, analyze/evaluate, and apply the latest information as it becomes available. In response to these challenges, the University of Pittsburgh School of Nursing has increased its emphasis on the skills and knowledge necessary to engage in evidence-based practice (EBP). EBP is a process by which nurses make clinical decisions using the best available research evidence and their clinical expertise as well as the preferences and values of the patient and family. Research has shown that clinical decisions based on best evidence can improve the quality of care and the patient’s quality of life.

Teaching EBP is much more than simply bringing evidence into the classroom. Students learn EBP as a total process, beginning with identifying which clinical questions to ask. Then, students learn how to find, evaluate, and apply current evidence. Finally, students learn to evaluate the effectiveness of care and continue to improve the process. The EBP process is integrated throughout the curriculum beginning in the freshman year and continuing through the graduate program offerings to ensure that graduates apply new information wisely and systematically throughout their careers.

Additionally, all students in the School of Nursing are prepared in healthcare informatics beginning in the spring term of the freshman year. Students learn about information technology applications that manage clinical information systems, support patient care, and examine how healthcare data are transformed to nursing knowledge. Informatics applications support EBP by helping students access and evaluate current research. EBP requires practitioners to judiciously access and evaluate current best evidence in making decisions about the care of individual patients. In order to apply EBP, nurses must be able to build a patient, intervention, comparison, and outcome (PICO) outline and develop an answerable clinical question for the particular problem or case presented. Assessing and Accessing the Evidence (AAE) is a new online learning tool designed to help faculty teach the fundamentals of EBP. The AAE learning tool helps faculty and students build a PICO outline, practice developing an answerable clinical question from each problem case presented, and demonstrates how to find evidence in the research literature to answer the question. The program was conceived and created through the efforts of a multidisciplinary EBP working group at the School and the Health Sciences Library that set about to develop creative methods for learning through the adaptation of technology.

STUDENTS MAKE A DIFFERENCE

Like many of the clinical faculty, Marie Fioravanti, MSN, RN, instructor in the Department of Acute and Tertiary Care at the University of Pittsburgh School of Nursing, maintains an active clinical practice. Working on the floor is one of the ways she gives back to the profession and makes a difference. Students also benefit from faculty who stay current with nursing practice and maintain their clinical skills.

Each term, Fioravanti assigns her students a project: “I tell the students to ask the head nurse and the staff members about a question they’ve always had but never had time to look up,” she says. For example, Fioravanti noticed the staff on her unit sometimes used clean technique and sometimes sterile technique when doing a dressing change. “I was taught to always use a sterile technique when doing a dressing change, so one student was assigned to research current best practices in the literature, then give a PowerPoint presentation on the findings to the class, and a paper to the head nurse.”

The student’s research revealed that while the sterile technique is still required in some situations, the clean technique is appropriate in others. As a result, Fioravanti changed her practice based on current best practice. Incorporating evidence-based practice into their clinical experience is another way our students make a difference.
research, and hospital administration where they work in patient management, apply research to practice, develop practice protocols and procedures, and educate patients and other professionals.

Refer to the article on page 22, “From Students to Leaders,” for a more in-depth review of each of the School’s master’s programs.

EDUCATING NURSE LEADERS

The School offers several nursing leadership programs to prepare nurses for management positions.

The School of Nursing introduced a new advanced specialty master’s degree program for nurses who do not wish to leave the bedside but would still like to take on an expanded role within their organizations. The Clinical Nurse Leader (CNL) master’s program is designed for nurses who want to make a difference in the clinical setting. It is not a management position. While the nurse manager role is largely administrative, the CNL brings a high level of clinical competence and knowledge to the point of nursing care and serves as a resource for the nursing team. The role of the CNL can impact patient outcomes and make healthcare delivery more efficient and effective by coordinating, delegating, and supervising the care provided by the entire healthcare team.

Leadership training also is offered at the doctoral level in the School’s new Doctor of Nursing Practice (DNP) program.

Nurses prepared as skilled leaders will influence strategic change in the healthcare environment.

DOCTORAL PROGRAMS

DOCTOR OF NURSING PRACTICE (DNP)

Another new educational opportunity is available at the School to help leaders in the nursing field meet the evolving expectations and demands of the modern healthcare system. The Doctor of Nursing Practice (DNP) at the School of Nursing is the first to be offered in Pennsylvania.

The DNP is designed for nurses seeking a doctorate in advanced nursing practice or in nursing leadership, and offers an alternative to research-focused doctoral (PhD) programs. While existing practice disciplines focus on research, education, or practice, the DNP combines all three for advanced patient care and leadership. Nurses graduating from this program will be prepared with a blend of clinical, organizational, economic, and leadership skills. A 2005 report from the National Academy of Sciences called for nursing to develop a nonresearch clinical doctorate to prepare expert practitioners who also can serve as clinical faculty.

The DNP moves nursing in the direction of other health professions: medicine (MD), dentistry (DDS), pharmacy (PharmD), psychology (PsyD), occupational therapy (OTD), physical therapy (PTD), and audiology (AudD) all offer practice doctorates. The American Association of Colleges of Nursing intends the DNP to be the terminal degree for all advanced practice nurses by 2015. Master’s-level nursing will continue, but this practice-focused program gives advanced practice nurses the opportunity to extend their existing master’s-level preparation to the doctoral level. “The DNP brings the education of advanced practice nurses to a new level of state-of-the-art and science expertise that is commensurate with the scope of practice required by the discipline and profession,” says Jacqueline Dunbar-Jacob, dean of the School of Nursing. The School is currently offering two different DNP tracks, one in nursing administration and one for the clinical nurse specialist role, including adult medical surgical and psychiatric mental
health. Additional tracks will be added pending state and practice approvals.

Current research has established a clear link between higher levels of nursing education and improved patient outcomes. “The DNP degree reflects the level of scientific knowledge and practice expertise required for nurses in these roles to assure high-quality patient outcomes,” Dunbar-Jacob says.

RESEARCH-FOCUSED DOCTORAL (PHD) PROGRAMS

The PhD program at the School opened in 1954. At the time, Pitt was one of the first three schools of nursing in the nation to offer doctoral preparation in nursing. Today, the School of Nursing is ranked among the top 10 graduate programs in the country.

The University of Pittsburgh is recognized as a major nursing research center and has attracted national, state, and local recognition for its commitment to high-quality, innovative research, and its multidisciplinary, collaborative process. With more than $10 million in research funding, the School is ranked fifth in the amount of funding received from the National Institutes of Health and has been designated a research-intensive environment by the National Institute of Nursing Research. Faculty at the School engage in clinical and basic science research, with the goal of improving care for individuals across the life span.

Students benefit from the School’s affiliation with the University of Pittsburgh Medical Center (UPMC), which is distinguished by ongoing research and medical innovations. But the doctoral program at the School is particularly distinguished by its mentoring system. Emulating the behaviors of faculty models, students are prepared to serve the profession by assuming multiple roles. In addition to teaching instructional theory and research skills, students who make a difference.

continued on page 15
Four recent studies at the University of Pittsburgh School of Nursing in the fields of technology, genetics, and critical care have been funded by the National Institutes of Health (NIH) with the goal of impacting patient care through translational research. The most important characteristic of translational research is the clinical interface: bi-directional in nature, it works from the laboratory to the clinic, and from the clinic back to the laboratory. Translational research is inherently collaborative and interdisciplinary, with the objective of moving research toward effective therapies.
The School of Nursing recently received two training grants from the National Institute of Nursing Research (NINR) to train research nurses in two areas: technology and genetics. The nurse researcher of the future needs to be able to design, apply, and evaluate relevant technology; examine the acceptability of high-tech solutions to patients; and collaborate with bioengineers to refine existing or develop new technologies that have the potential to assist/augment the delivery of interventions and improve biobehavioral outcomes. Both of these fields are rapidly developing, and both impact nursing practice.

Technology and its use in patient care delivery are becoming increasingly pervasive. One way to decrease the public health burden of chronic and critical illness may be through technology-supported interventions that have the potential to assist/augment the delivery of interventions and improve biobehavioral outcomes. Both of these fields are rapidly developing, and both impact nursing practice.

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Technological advancements were made, and continue to be made, because of innovations in high throughput genomics technology, bioinformatics, and genomics research.

As the largest and most trusted group of professional healthcare providers, nurses are in an excellent position to bridge the gap between genomics research and clinical practice. They interact with patients at all stages of life, in all aspects of health and wellness, and in all clinical arenas.

And, as the first school of nursing in the nation to develop active genomics laboratories in house, the School of Nursing is an ideal environment to develop such a training program. Directed by our own research faculty with formal training in the field of genomics, the lab houses extensive internationally based biological specimen banks with linkages to clinical databases that are available for trainees’ research projects. These unique resources continue to expand and increase in size and diversity as our research portfolio continues to grow. This training program prepares pre- and post-doctoral nurse scientists in genomics.

Lung transplant recipients have more complications and higher mortality rates than recipients of other organs, yet strategies to maximize recipient involvement in improving health outcomes have received little attention. Annette DeVito Dabbs, PhD, RN, assistant professor in the Department of Acute and Tertiary Care, received funding from the NINR to test whether providing lung recipients with a pocket computer and custom programs to monitor their conditions, take medications, and communicate with the transplant team will help prevent
and detect the acute complications that interfere with the quality of survival after lung transplantation. The work has relevance for promoting self-care activities for patients with a variety of chronic conditions. This plan proposes a novel intervention using a hand-held, interactive technology to promote self-care agency and self-care behaviors in lung recipients, thus maximizing the contribution of recipients themselves in preventing and detecting post-transplant complications.

A recent recipient of the Lucie Young Kelly Faculty Leadership Award, DeVito Dabbs plans to establish a lung transplant symptom registry at the School of Nursing to provide a formal mechanism for multicenter collaboration and build a central repository of symptom data collected from participating lung transplant centers worldwide. Lucie Young Kelly, PhD, RN, FAAN, is recognized nationally and internationally as a leader in the field of nursing. Her work as an author, professor, administrator, lecturer, and consultant has produced a distinguished record of accomplishments and awards, and her contributions are both a source of inspiration and pride to the nursing profession. The Lucie Young Kelly Faculty Leadership Award is given every three years to an outstanding faculty member who is recognized by his or her peers and the School’s administration as having demonstrated outstanding leadership qualities within the discipline of nursing.

DeVito Dabbs’ plan for a lung transplant registry will assist nursing researchers, as well as researchers for other disciplines, in following trends and patterns of lung transplant recipients in more diverse populations and changing the way health professionals approach symptom management with their patients.

**HELP FOR THE CRITICALLY ILL**

Mary Beth Happ, PhD, RN, associate professor in the Department of Acute and Tertiary Care, also is researching how health professionals—in particular, critical care nurses—approach the critically ill. Happ’s early findings of a five-year, NIH-funded study titled “Improving Communication with Nonspeaking ICU Patients” shows how speech-generating devices (SGDs) can help patients with respiratory tract intubation communicate with others.

Critically ill patients are often unable to speak as a result of respiratory tract intubation for airway management and mechanical ventilation, which can be a traumatic life event that is frightening, reduces patient participation in care and decision making, and impairs pain and symptom assessment. No large-scale communication intervention studies have been conducted in the intensive care unit (ICU) setting. Happ has discovered that although writing and making gestures were the most common communication methods among these patients, SGDs may be an appropriate assistive communication strategy for postoperative patients with head and neck cancer. Nurses can facilitate effective patient communication with SGDs by cuing patients on device options and positioning SGDs within easy reach.

**IMPACTING NURSING PRACTICE**

Researchers at the School of Nursing work with interdisciplinary faculty throughout the University on a wide variety of programs that position trainees to conduct innovative, state-of-the-art, translational research that advances the science and practice of nursing—now, and in the future.
SKILLED NURSES  continued from page 11

mentors encourage students to actively participate in professional organizations and to serve as practicing clinicians, researchers, leaders, and teachers. “Early mentoring is important to help students through difficult times and situations,” says Judith A. Erlen, PhD, RN, FAAN, professor in the Department of Health Promotion and Development, PhD program coordinator, and associate director of the Center for Research in Chronic Disorders. “A person isn’t finished when he or she graduates!”

80 PERCENT OF THE SCHOOL’S PHD GRADUATES ASSUME FACULTY POSITIONS

Educating the next generation of nurses is essential to address the nursing shortage. And to accomplish that, the profession needs more qualified nurse educators—in the classroom and in the clinical setting. “Good clinical faculty and good clinical facilities are important to give students meaningful experiences as part of their nursing education,” Erlen says. “We are fortunate to have partnerships with some of the most outstanding clinical facilities in the country.” UPMC offers high-tech, cutting-edge experiences in academic health center hospitals as well as community care.

“The PhD program prepares students to assume more than one role—people who can do research and teach, and lead, and who actively participate in national organizations to advance the practice of nursing,” Erlen says. “There are parallels between teaching and research skills. Both disciplines require the ability to establish objectives and communicate information in a clear, organized, articulate manner. You have to know your audience, and you need to be able to think on your feet and be a good storyteller in order to demonstrate and sell your ideas.”

More than 90 percent of the School of Nursing’s doctoral students seek a position in academia upon graduation. “You can’t change the world by yourself,” Erlen says. “But, as a nursing educator I have been able to build an army by educating people to feel the way I do. And, with an army who shares the same values, maybe we can win the war.”

ADVANCING THE PRACTICE OF NURSING

More than 11,000 graduates from the School of Nursing’s baccalaureate, master’s, RN Options, accelerated second degree, and doctoral programs are having an impact on the profession as top-notch clinicians, educators, researchers, and administrators all across the country and around the world, including six deans of schools of nursing, a former college president, and the chief executive officer of the Oncology Nursing Society. In addition, faculty and alumni serve on the boards of state, national, and international professional organizations. As graduates from the School of Nursing educate the next generation of nurses, Erlen’s army continues to grow and influence the practice of nursing and healthcare.

“Good clinical faculty and good clinical facilities are important to give students meaningful experiences as part of their nursing education.”

NATIONAL RESEARCH COUNCIL

The National Research Council (NRC), part of the National Academies, has recognized PhD nursing programs as research doctorate programs in the life sciences. The NRC collects comparable data about doctoral programs as part of its mission to further knowledge and advise the federal government. The collected data also can be useful to doctoral students; provide potential students and the public with accessible, readily available information on doctoral programs nationwide; help universities improve the quality of their doctoral programs through benchmarking; and enhance the nation’s overall research capacity.