



A Curious Mind

Patients, providers, and communities find healing thanks to the nurses who ask “why?” By Geoff Brown | Illustration by Jesse Kuhn

In a glass-walled conference room overlooking the grounds of the storied National Institutes of Health in Bethesda, MD, Patricia Grady, PhD, RN—a long-time researcher in stroke and neurological disorders, and director of the National Institute of Nursing Research (NINR)—says that to understand nursing research, you need to understand the special role of nurses.

“We are unique,” Grady explains. “We are at the interface of mind and body, of biology and behavior.”

More than any other healthcare profession, nurses are best suited to observe and adjust treatments, medications, and even habits for patients. They can see not just the scientific and medical outcomes but also the human results of treatment, or the emotional behaviors that may lead to the need for treatment. Given that position, nursing research can provide specialized insights and discoveries that other healthcare research might miss.

Sitting in her office at the Johns Hopkins University School of Nursing, Dean Martha Hill, PhD, RN, FAAN, puts it this way: “Nursing researchers ask: What do patients need? What

do nurses do to meet those needs? How does that make a difference? To whom? Nurses also look at things important not just to patients and families, but to other members of the healthcare team: physicians, pharmacists, social workers.”

It’s those special traits, abilities, and roles that give nursing research a new and important role in the evolution of healthcare in America. Nursing research has begun to take advantage of a vast body of experiential and evidence-based knowledge and wisdom and curiosity amassed by nurses working with patients in all sorts of settings.

“Nursing research is being partnered with other healthcare research as a critical part of the larger healthcare picture,” says Grady. “There’s a new focus on prevention, and on interaction with the patient, which is the natural environment for nurses.”

“Nurses see the breadth of experiences and are aware of the need to look comprehensively not only at physiological factors but at psychological, social, and emotional factors—the broader determinants of health,” says Dean Hill. “It’s marvelous multidisciplinary work.”

A Growing Discipline

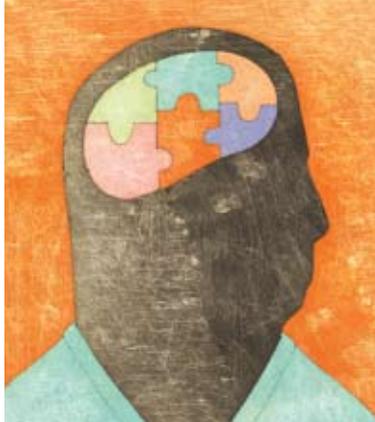
The modern focus on multidisciplinary healthcare research has meant that the groundbreaking and critical work of nurses is now being celebrated in a way that would have seemed impossible just a few decades ago.

“I think research was a foreign concept to nurses,” says Dean Hill. “Thirty years ago, the term ‘nursing research’ was snickered at. It was considered an oxymoron. ‘Why would nurses do research?’ There were no courses for research design in undergraduate nursing school.”

By the 1980s, however, Dean Hill says “that all began to change.” Johns Hopkins University opened its School of Nursing in 1984; Hill was one of the first faculty members, and laughs that she made up about 50 percent of the entire research faculty in those early days. Despite that small beginning, the School of Nursing had a clear mission: It was being developed to follow the rigorous and challenging model followed by the School of Medicine and School of Public Health.

“When we started, we had explicit expectations that the School of Nursing would meet the exacting standards of all the other Johns Hopkins schools,” Dean Hill says. “Johns Hopkins is a research intensive, international institution, and that’s what the School of Nursing has become. The first 10 years, we focused on developing a curriculum; the second decade, we built a research infrastructure. Today, my mandate is to continue to move the school forward as a research intensive, internationally-recognized school.”

Scott Zeger, PhD, vice provost of research for Johns



Hopkins, explains that “at Johns Hopkins, we believe that education is inextricably tied to discovery. Unlike many schools of nursing, ours has built its own research infrastructure. They have a research office that’s really admired and envied across the university.”

As healthcare research has changed to encompass more disciplines and experts from different fields, it’s becoming standard practice for Johns Hopkins research teams to include researchers from the schools of Medicine, Nursing, and Public Health. “The School of

Nursing is a force for broadening the perspective on health,” Zeger continues, “and it’s common at Johns Hopkins to involve faculty from all three schools.”

“Nursing is at the table now because other healthcare practitioners understand how much it has to offer,” Grady says. Why is that? “We’re in touch with real world issues.”

“We all have different roles, and the nurses’ role and responsibility is different from the physicians, social workers, and physical therapists,” says associate professor Nancy Glass, PhD, MPH, RN, FAAN. “But when I talk to a patient, I’m thinking about that team approach. When I talk to a victim of domestic violence, and she’s going to a shelter, a physician may be thinking about

treating the physical injuries. I’m thinking, ‘OK, how do we get her medications to the shelter? How do we get her kids to school?’”

“There’s nothing like a modicum of sense,” says Grady. “We are in a unique position to partner changes in physiology with changes in behavior.”

The School of Nursing has led the way in developing evidence for why we should do specific things in clinical practice. We go out into the community to improve their health. We feel comfortable outside the ivory tower of academics.

Critical at Every Juncture

National funding propels nursing research forward

The big question facing healthcare researchers in the 21st century is money: where it’s coming from, and where it will be allocated. Given changes in priorities and focus, Patricia Grady, director of the National Institute for Nursing Research (NINR) explains how that organization is looking to the future: One of the biggest priorities, she says, is training the next generation of nurse researcher faculty.

“Seven percent of NINR’s budget goes to training, which is two times the National Institutes of Health (NIH) average, and number two at NIH overall. People are desperate for faculty out there. ARRA (the American

Recovery and Reinvestment Act of 2009) gave about \$35 million over two years, and we’ve spent the majority of it on research project grants and funding of student fellows, about 60 in total.”

Going forward from 2010, says Grady, there will be tough realities—but also potential. “The budget constraints are there. We are optimistic that funds will be available and that we will get a proportional share.”

The change in focus toward preventing poor health behaviors should prove beneficial for nursing research. “The President is outspoken about the importance of science research and health,” Grady says,

“and of prevention and community-based health. Because of that emphasis, nurses are so critical at every juncture.”

The new recognition of the importance of nursing research means good things for the profession. “Nurses and nursing research have the ability to make an impact in ways we haven’t previously,” says Grady. “We expect that to continue and accelerate. The public wants healthcare to use our resources wisely, and they are demanding that patients have a higher quality of life than previous generations. The research we fund shows new ways to make that possible.”

Encouraging Tomorrow's Investigators

Because nursing research is still a developing discipline, it offers a great deal of opportunity for discovery, innovation, and pioneering work—which should all be attractive incentives for students. But because nursing can offer relatively lucrative pay for nurses with a bachelor's or master's degree, there has been a historic shortage of nurses pursuing their PhDs.

A normal career track might go like this: the student attends undergraduate nursing school; then goes on to do five or so years of clinical work; then returns to school for a master's; then heads back into the workforce. In the past, PhD candidates were often in their 50s—which doesn't leave much time for a research-based academic career. The previous generation of nurses saw PhD-level nursing research as a completely different option than pursuing a long working career helping patients.

That's not true anymore, says Grady. "It doesn't have to be either-or," she says firmly.

"I can't tell you how many students have said, 'Research seems exciting, but I would miss the patients if I went into research,'" explains Marie Nolan, PhD, MPH, RN, FAAN, and director of the Hopkins nursing PhD program. "I have to explain that we don't do research in our offices! We're constantly working with patients and clinicians, seeing the problems, and evaluating treatment."

"The School of Nursing has led the way in developing evidence for why we should do specific things in clinical practice," says Glass. "We go out into the community to improve their health. We feel comfortable outside the ivory tower of academics."

Some nurse researchers—like Gayle Page, DNSc, RN, FAAN, director of the Center for Nursing Research and Sponsored Projects—even take what nurses have learned from patients and observation and use traditional lab methods to try to recreate and study problems that have no other way of being studied, like pain management. In her work, "there's a continuum of translation from bench to bedside. I use animals to model pain—it's reverse translation from patient information. I get the ideas from patients, and I translate it to animals."

Whether conducted in patient homes, communities, or in the laboratory, says Nolan, the key to increased understanding about nursing and interdisciplinary research is exposing young nurses earlier in their careers. At Hopkins, baccalaureate nursing students take a required course in nursing research, and an Undergraduate Research Honors Program allows a select group to conduct their own research projects under the guidance of a faculty mentor.

Back at the NINR offices and labs in Bethesda, Patricia Grady is also "encouraging the young undergraduate to get involved early and to start doing research early." It's a message that she is pushing out into the larger nursing world: "It's fun to notice a problem and ask questions—that quest for making things better. A curious mind is the thing you most need."

Patricia Grady, PhD, RN



Discover A Better Way to Care

Exploring uncharted territory, researchers are blazing a path to better nursing practice. By Geoff Brown | Illustration by Jesse Kuhn

Fridays were not the easiest days for research at one particular South African hospital, explains School of Nursing PhD student Carrie Tudor, MPH, BS '08, RN. That's because Friday was the day when the patients in the drug-resistant tuberculosis (TB) ward would most likely riot.

In fact, over this past summer, Tudor and other researchers from Johns Hopkins were chased out of the hospital by disgruntled TB patients. "They liked to riot on Fridays," says Tudor, "because that would put the hospital in lockdown, and that would get the staff locked in for the whole weekend."

The riots are a kind of payback from the patients for their own treatment: government policy dictates that patients with drug-resistant TB be locked away for anywhere from six months to two years, until they're deemed no longer infectious.

Armed security guards keep the patients in poorly maintained areas; the rioting is an attempt to get better treatment and secure basic rights, and the presence of outside healthcare workers adds to the tension.

For Tudor, whose 10-year career in public health research has taken her from Myanmar to Tibet, the experience was a new one, but it reinforced the importance of the research she's performing in her new role as a nurse. She and colleagues are visiting 24 South African drug-resistant TB hospitals to find ways to protect healthcare workers from contracting the disease.

"I had originally been looking at doing research in China," she says, "but when I got the opportunity to travel to South Africa with my adviser [Assistant professor Jason Farley, PhD, MPH, CRNP], I took it. Now that I've been there, I feel very strongly about helping the patients and healthcare workers there any way I can."



Research with Reach

Tudor's dissertation work—finding out how to protect healthcare workers from the drug-resistant infectious disease they're trying to help cure—is a perfect example of the primary focus of nursing research: People. "Nursing research takes the lead in focusing on the individual, while our interventions may be at the individual, community, or system level," says associate dean for research Jerilyn Allen, ScD, RN, FAAN.

Nursing research has grown to fill a gap that was developing as other fields began to specialize and expand into specific areas of discovery. Medical researchers perform laboratory ("bench") work and study the interaction of drugs and treatments with people ("bedside"); public health looks at the conditions of populations, be it a few dozen or an entire race. Where nursing



research has blossomed is in reconnecting the patient and the healthcare provider with the findings made across the healthcare spectrum.

Medical technology and instrumentation have made incredible strides in the past decade, providing caregivers with volumes of data on the physical status of patients. What patients haven't been able to express as well to physicians and nurses are less tangible conditions, like pain

or the threat of ongoing domestic violence. So what nurse researchers at Johns Hopkins have done is develop ingenious tools that reliably and scientifically measure these factors.

Two well-known examples to come out of Hopkins nursing research are the Pain-O-Meter and the Danger Assessment tool. The Pain-O-Meter, developed by professor Fannie Gaston-Johansson, PhD, RN, FAAN, is a simple, reusable

Community Partnerships Improve Care

Good nursing research requires an intriguing mix of scientific method and curiosity, wisdom and experience, and common sense. That's because the answers to certain problems are easy, as long as the question is being asked correctly; other times, the question itself is hidden in missing data or misconceptions that need to be sorted out.

"I think that one thing we're doing very well is focusing on research that has a significant impact on a population's health," says associate professor Nancy Glass, PhD, MPH, RN, FAAN. "We go out to communities, talk with people and leaders, and try to improve their health. We know and learn the population we're working with. It's not easy. It makes the research more time-consuming. But what we've found is that investing that time provides much better results."

"Nurse researchers are very interested in researching social determinants," says Scott Zeger, vice provost for research at Johns Hopkins and professor of biostatistics. "If you ask, 'What causes stroke?', the natural answer is high blood pressure. But one more step backwards is the answer, 'a diet rich in salt.' And that's where a medical or public health researcher would look. But nursing (and some public health researchers) would go back one more step, and look at what life experiences and social factors lead to that salt-rich diet."

That's exactly what School of Nursing Dean Martha Hill, PhD,

RN, FAAN did when she began her dissertation.

Hill and her research team—which included Miyong Kim, PhD, RN, FAAN, who now serves as chair of the Department of Health Systems and Outcomes—could identify no studies of



trying to control high blood pressure in inner-city young black males. So they began a study of their own.

"We had a hard time recruiting for the study," recalls Kim. "We were giving away free medication and free services for hypertension. We told people, 'You're a walking time bomb.' We offered these free services, and no one came. Why?"

Being nurses, they knew that the answer was within the patients themselves—all they had to do was figure out how to draw it out. "We said, let's do a focus group. Put people in a room." The questions they were asking were getting them nowhere.

That's because, Kim explains, "We weren't asking the fundamental question. We finally asked them, 'Where will you be in five years?' One young man said, 'I don't think I'll be alive or walking around East Baltimore. I'll be dead or in jail.' All of his peers were dead or incarcerated. So, taking a hypertension drug is farthest thing from his mind. These young men were completely preoccupied with the difficulty of life."

But Hill and Kim finally had their baseline. And now that they'd learned from where they were starting, Hill and Kim could start the fight to bring down high blood pressure in this population. This innovative work was one of the first of its type, and it was only made 24 years ago. That type of research, and the data it revealed, proved that the concept was not only correct, it was vital to improving health.

"In East Baltimore, Johns Hopkins schools had a bad reputation of 'helicopter research,'" says Kim. "We would get in, research, and leave without giving anything to the community. Now, the goal is, 'Whatever you did, leave it as a permanent structure for the community.' The School of Medicine is collaborating with us in part because the School of Nursing put in so much sweat equity."

"Nursing has a long history of public trust," she says. "Our empathy and advisory skills allow us to do a level of research that can make a difference in these communities."

eight-inch plastic wand that looks a bit like a wide ruler. The device's tabs, diagrams, and sliding markers help patients translate what kind of pain they're feeling—sharp, dull, throbbing, waning—and where they're feeling it.

The Pain-O-Meter lets patients provide clear visual benchmarks that help nurses and other healthcare workers understand and track the patient's pain, and gives them a better chance to help ease it. Gaston-Johansson developed the patented device in the early 1990s in response to the growing concern about inadequate pain management and treatment, and it has now been successfully used in the U.S. and Sweden for decades.

It's a perfect example of the wisdom and ingenuity of nursing research: after seeing patients and providers having difficulty communicating about pain management, a nurse researcher created a device that allows the patient to quickly and clearly express his or her situation, which better guides treatment, and then allows for immediate re-evaluation by the patient. "Nurses look at things that are important not just to patients and families," says Dean Hill, "but to other members of the healthcare team."

The Danger Assessment tool is not a physical device like the Pain-O-Meter: it's a series of questions. But those questions are also effective in getting the patient to communicate crucial information to nurses and healthcare providers, and it can save lives. Created by associate dean Jacquelyn Campbell, PhD, RN, FAAN, the Danger Assessment is presented to victims of domestic and intimate partner violence; after determining the frequency and severity of abuse, the Danger Assessment poses 20 questions that help both nurses and patients get a clear picture of the facts and situation. That assessment guides better treatment decisions, and it also gives patients a new perspective on their risk level that can lead to them entering a shelter or seeking legal protection.

"The School of Nursing has led the way in developing evidence for when to do specific things in clinical practice," says Nancy Glass, PhD, MPH, RN, FAAN, who works with victims of domestic and partner violence in the U.S. and Africa. It's that specificity that can make all the difference. "We now ask four questions of a patient, and they are not 'Have you been abused?' but rather specific items such as, 'Have you been hit, slapped, punched, choked, or otherwise physically hurt?' From there, if the answers warrant, we'll use the Danger Assessment tool to ask more questions. Asking questions can literally save a woman's life."

Karen Davis, MS, RN, NEA-BC

PhD candidate

Areas of Specialty:

intensive care and nursing administration

Why is nursing research important?

The results from nurse-led research studies have been the impetus for a transformation in nursing practice and have provided the foundation for evidence-based nursing.

Why did you choose this specialty?

I was drawn to nursing administration because I like to design better ways to take care of patients and develop creative solutions to problems that get in our way of delivering excellent nursing care.

Latest project:

My dissertation research is aimed at helping heart failure patients experiencing subtle cognitive impairment improve their self-care behaviors through a targeted hospital discharge intervention. The results will help us keep individual patient needs at the center of the interventions and improve health.

Sharon L. Kozachik, PhD, RN

Assistant Professor

Department of Acute and Chronic Care

Area of Specialty:

Pain, Sleep Disturbance

What do you like about being a nurse researcher?

My entire career in nursing, from bedside nurse to nurse scientist, is driven by my desire to ease suffering. The discovery is very exciting and energizing.

Latest project:

My current projects use a rat model to determine how chronic sleep loss impacts pain due to cancer treatment and the mechanisms that link together pain and sleep disturbance.

How will your research help others?

My work will help to provide a foundation upon which to develop improved clinical care for persons who endure persistent pain.



Sharon Kozachik researches pain and sleep disturbance.

“Nurses definitely lead the way in advocating for self-care management to promote health and prevent disease,” says Allen. “Empowering the patient is something unique to the nursing profession.”

Focus on the Future

The School of Nursing’s PhD program stresses three things, according to Marie Nolan, PhD, MPH, RN, FAAN, and director of the program. First is creating a tight connection between a student and a faculty member with a sustained program of research—and that means maintaining a low student-to-advisor ratio. “Our students are in a closely mentored relationship with a funded researcher, and our faculty have only two to five student advisees each,” says Nolan.

That kind of close relationship, and exposure to the innovations and discoveries of Johns Hopkins nurse researcher pioneers, creates “a ripple effect,” says Dean Hill. “It gets more students saying, ‘I want to do what she’s doing.’”

Today’s students are also looking for a different experience than that of their professors. “We want to immerse students

into the community of learning,” says associate dean Pamela Jeffries, DNS, RN, FAAN, ANEF. “We want students to feel like they belong to the unit. This is a different generation of learners—they’re high-energy, high-expectation, and not passive. We have to engage them. They like experiential, real-life learning. They’re poised, goal-directed, and they keep the faculty on their toes.”

The second mission is to take advantage of interdisciplinary collaboration and research, which teams Johns Hopkins School of Nursing researchers with counterparts from the School of Medicine and the Bloomberg School of Public Health. “Our collaborations are made easier by our location. It’s as easy as walking across the street to medicine or public health and saying, ‘I need an expert in quality of life measurement for a study,’” says Nolan.

Nursing research has earned its place through sound scientific method and persistence. “By doing so well for so long, I think we’ve gained respect and a very good reputation,” says Miyong Kim, PhD, RN, FAAN. “You need to have a nurse on your team.”

Funding for the Future

Philanthropists encourage funding of doctoral nursing education

by Kelly Brooks-Staub

“There’s something special about the nursing profession,” says philanthropist Donald Jonas. “You can’t write it up. It’s the people, the kindness, the relationship with your fellow workers. It touches me every time.”

Donald Jonas and his wife, Barbara, are avid supporters of doctoral nursing education, and they’re encouraging others to donate to the cause as well. Last October, the Jonas duo gathered philanthropists, doctoral students, faculty, and administrators at the Johns Hopkins University School of Nursing to discuss the need for doctoral education funding.

Karen Haller, PhD, RN, FAAN, vice president for nursing and patient care services at The Johns Hopkins Hospital, opened the session with an irrefutable argument for PhD-level nursing education: “One of the key reasons for the nursing shortage—predicted to be 500,000 nurses by 2025—is that we’re lacking faculty to train the next generation of nurses and nurse leaders. To solve the nursing shortage, we need more doctoral nursing education.”

The Jonas Center for Nursing Excellence Nursing Scholars Program, funded by Donald and Barbara Jonas, provides tuition grants and living stipends for PhD students who aspire to become nurse educators. Jan Kaminsky, BSN, a pre-doctoral fellow at JHUSON, is a current Jonas Scholar and plans to

teach on a nursing faculty in New York City.

“We’re a small foundation,” said Jonas, “but we have enormous ambition and drive to make some good happen while we’re still around. We hope others will do the same.”



Johns Hopkins University Trustees Emeriti Arthur Sarnoff (left) and Morris Offit met with philanthropists Donald and Barbara Jonas in October.

Professor Gayle Page DNSc, RN, FAAN has been working with Jennifer Haythornthwaite, PhD, a clinical psychologist from the School of Medicine for more than seven years on pain research. The project began with a post-doctoral student of Haythornthwaite's who wanted to learn more about biometric outcomes, an area of Page's research. "Now, we're collaborating on each other's grants," Page says, and they are co-directors of the Hopkins Interdisciplinary Training Program in Biobehavioral Pain Research, a postdoctoral, interdisciplinary training program.

"The NIH and healthcare in general are asking for a broader approach," Page explains, "and that means research needs to be done as more of a team effort. Pain research is very amenable to that approach. Jennifer is a psychologist, and I'm a nurse and a neuroscientist, which makes our approaches really complementary."

The final strategy in PhD education is to encourage faculty and staff to look beyond Baltimore and the U.S. "We have not just a national focus, but a global one as well," explains Nolan—one that sends doctoral students like Tudor to South Africa, or Sara Rosenthal to Berlin, Germany.

"I was asked to present my research at a university in Berlin," Nolan recalls, "and I said, 'I have a doctoral student [Rosenthal] doing research on how parents make decisions about their critically ill infants in the NICU. She speaks German. Would you be interested in having her present as well?' And they said absolutely, bring her, and now she's also giving a presentation."

Associate professor Nancy Glass, PhD, MPH, RN, FAAN, whose current work researching intimate partner violence (IPV) takes her from Oregon to Baltimore and to the Congo and Uganda, says she has "the best job in the world."

"The School of Nursing has evolved over time," says Glass. "I left Johns Hopkins for five years to do work in Oregon, but I came back because of the growing focus on global health. For students and faculty to now have the opportunity to do clinical work in Haiti or Uganda shows how the school's commitment has evolved. I never minded getting on a plane. Working on violence against women is not easy work. You have to be there, and be face-to-face as much as you can."

Choosing the Right Route

As she prepares to head back to South Africa for another month of study and training hospital healthcare workers, Carrie Tudor says she knows she made the right choice by becoming a nurse. "Coming from public health, nursing was the right route for me. Nursing and public health are very similar—they both look at people who are often overlooked, and things that sometimes get missed. Being on the ground is the only way to go. You can't fly in, look at it, and walk away. You need to be in the hospitals and clinics, building relationships.

"And when I go into hospitals and clinics now, I can tell nurses there that I'm a nurse too," Tudor explains, "and they say, 'Oh, okay. You're one of us.'"

Deborah Gross, DSNc, RN, FAAN

*Leonard & Helen R. Stulman Professor in Mental Health and Psychiatric Nursing
Department of Acute and Chronic Care*

Area of Specialty:

Parenting and early childhood mental health

What do you like about being a nurse researcher?

Like all nurses, I wanted to make a difference in people's lives. As a clinician, I could do this by helping one patient or one family at a time. As a researcher, I found I could do more and make a greater impact, even helping people I'm never going to meet.

Latest Projects:

I'm working on projects in Chicago, Baltimore, and New York City to help parents and improve children's mental health.

How will your research help others?

The research we are doing is designed to help millions of parents charged with raising happy, healthy, and competent children.

David A. Boley II, MS, ANP-BC

*PhD Student
National Institute of Nursing Research Intramural Research Fellow*

Areas of Specialty:

Skeletal Muscle Adaptation to Exercise, Nursing Education

Why is nursing research important?

We have to keep up with the times! Every day, nurses use the knowledge base we've established through research to make evidence-based decisions that impact patients' health outcomes.

Why did you choose this specialty?

My dad suffered a fatal heart attack at the age of 54. Ever since then I've striven to keep myself active and healthy and to help others learn how to do the same. That's what led me to be a Personal Trainer and Nurse Practitioner.

How will your research make the world a better place?

I hope my research program will lead to improved methods for measuring physical activity and the establishment of a national surveillance program to monitor health-related fitness changes over time.



David Boley studies the impact of exercise on health.

WILL KIRK



Making Research Relevant

Exceptional patient care has its roots in evidence-based practice. By Geoff Brown | Illustration by Jesse Kuhn

Adding illness to a patient's woes is the last thing healthcare practitioners want to do. So in 2008, when Joyce Maygers, MSN, RN—who has spent 22 of her 23 years in nursing at Johns Hopkins—began to look for a research subject for her two-year Doctorate of Nursing Practice (DNP) program, she focused on urinary tract infections (UTI) in stroke patients, a group with which she has researched and worked extensively.

“There are a lot of data showing that stroke patients suffer from a high rate of urinary tract infections [UTI],” she explains, “but there wasn’t a lot of information on how to prevent them.”

That was the part that seemed strange to Maygers, because it is now common knowledge that urinary catheters (routinely

given to stroke patients) are a big culprit behind UTIs. Because of her clinical experience and skill at analyzing patient outcomes, Maygers suspected there was an easy answer to this problem: maybe it wasn’t necessary to catheterize every stroke patient or leave the catheters in so long.

When she started to look at the medical reasons for automatically ordering catheters for stroke patients, she found something surprising: “It became pretty clear that we didn’t have any clinical indicators for having some of these catheters,” she says.

That finding would become the basis for Maygers’s DNP research: She would spend a year working with physicians, nurses, and other healthcare workers at Bayview to consider if catheterization was really necessary. Would she be able to change the way these patients were being treated? And if so, would it benefit them?

Show Me the Evidence

Mayers' project is an example of Evidence-Based Practice (EBP), a systematic approach for nurses to critically evaluate research evidence. It involves applying experience, observation, and scientific method in new ways to approach an ailment or treatment, and it draws heavily on the eyes and ears and wisdom of nurses, who are the healthcare practitioners with whom patients spend the most time.

EBP is gaining favor because it addresses one of the historic weaknesses of medical research, which is the length of time it takes for a discovery or innovation to enter the clinical setting, or become common practice (a process known as "translation"). Research utilization—which involves years of development and research, then years of drug and clinical trials—is a much more (albeit necessarily) arduous process.

"You may have heard that it takes 17 years from the time new evidence is generated until its acceptance [and implementation by healthcare]," says associate professor Kathleen White, PhD, RN, CEA-BC, FAAN, who co-teaches the school's doctoral translation course, and is director of the DNP program. (This figure comes from an oft-cited study published in the *Yearbook of Medical Informatics 2000**): "We're trying to decrease that. In healthcare, in general, it should happen faster."

"Information takes, historically, a very long time to become practice," agrees School of Nursing Dean Martha Hill, PhD,

RN, FAAN. "Let's look at diabetic retinopathy. The findings about effective treatment were first published in ophthalmology journals. Well, diabetic practitioners don't read ophthalmology journals. So it took 15 to 20 years for that information to diffuse out to the diabetes treatment community."

The School of Nursing had made EBP and translation a priority for its DNP students: in fact, "Kathi White and I couldn't find another doctoral program that has a course in translation," says assistant professor Sharon Dudley-Brown, PhD, FNP, who teaches the course along with White.

"EBP is very inclusive," Dudley-Brown explains. "It has expanded the definition of scientific evidence, as it encompasses not just scientific evidence, especially in nursing."

Not only is it more flexible as a field of study, it's more adaptable as a course of action. "EBP takes into consideration patients' values, the skill level of practitioners, and resources available—or lack of them," says Dudley-Brown. "It's also more specialized than research utilization. It can be on the individual patient level. But it can also be on a larger

scale, if you're looking at how to improve unit outcomes for 40 or more patients. It's a real win-win for everyone, especially the patients."

By its very nature, EBP is often based in real-world observation and methodology—which means that it can more rapidly be applied to the clinical setting. It's more of an issue of getting the information out and changing behaviors



Johns Hopkins Nursing Evidence-Based Practice Model Guides Research Translation Around the Globe

'Are we providing the best possible care?'

"The Johns Hopkins Hospital Department of Nursing was looking at that question," says associate professor Kathleen White, PhD, RN, CEA-BC, FAAN, "and we realized we needed to develop our own model and guidelines to evaluate our patient care policies and procedures."

From this realization was born *Johns Hopkins Nursing Evidence-Based Practice Model and Guidelines*, a book providing a clear and concise approach to implementing evidence-based practice. Since its publication in 2007,

the book has been a Top 10 bestseller for Sigma Theta Tau International, helping thousands of nurses to translate nursing research into practice.

This spring, *Johns Hopkins Nursing Evidence-Based Practice Implementation and Translation* is hot off the presses, sharing vignettes, stories, strategies, and lessons learned from implementing EBP projects.

"The book shares the many avenues of translation," says White, who served as editor in collaboration with Stephanie Poe, MScN, RN, assistant director of nursing of clinical quality and informatics at the Johns Hopkins Hospital. "Sometimes, the research

doesn't lead to change. Not all projects have enough evidence, or strong enough evidence, to make the case for a practice change. When that happens, what else can we do? There is a quality improvement study, or a pilot research study. Or sometimes, you have to search over the evidence again. And even then, sometimes the evidence isn't always strong enough."

Johns Hopkins Nursing Evidence-Based Practice Implementation and Translation will be available in print or as an e-book through Nursing Knowledge International (www.nursingknowledge.org). For more information, visit www.ijhn.jhmi.edu.

or guidelines, rather than introducing a new drug protocol or piece of equipment. Sometimes, it can be as easy as adding a couple of questions to a computer screen.

“In our DNP Program, we had a nurse at Howard County General,” White says. “She was looking at patient pain treatment and using the Assess/Implement/Reassess (AIR) system. She asked, ‘How could we improve that cycle?’ She designed a screen to go within a patient’s electronic record that included [a way to record] the AIR results. It improved documentation, and served as a trigger to make sure the cycle was being completed.”

Lessons learned for one disease can even be modified to help treatment of another. “If we learn something about working with patients with a chronic condition like diabetes,” White asks, “couldn’t we translate that for another chronic condition, like heart disease?”

[Evidence-Based Practice] is often based in real-world observation and methodology — which means that it can more rapidly be applied to the **clinical setting**. It’s more of an issue of getting the information out and **changing behaviors or guidelines**, rather than introducing a new drug protocol or piece of equipment. Sometimes, it can be as easy as **adding a couple of questions to a computer screen**.

says Maygers, who is also a trained paralegal. “It was a real challenge going back to school with a full-time job and four kids, but this was the perfect course. I was looking to get in on the ground level and get a doctoral degree, but I didn’t have seven years to devote to it. Also, I was much more interested in EBP research, not in original research. I wanted to translate existing research to best practice.”

Those new, more rapidly-introduced best practices are the real benefit of EBP, and a big strength of nursing research-produced EBP. “There’s a long history of public trust of nursing,” says professor Miyong Kim, PhD, RN, FAAN, and director of the Research Center for Cardiovascular Health in Vulnerable Populations. “We can make research relevant for people. Translation is the goal.”

Cooperating Across Disciplines

Maygers soon found she had a lot of allies in her quest to reduce the number of catheterizations—which was critical, because “without interdisciplinary support, this wouldn’t have worked.” When she showed the team the data and articles she had compiled on the number of UTI infections

EBP is the focus of the School of Nursing’s DNP Program, which was designed for professional, working nurses looking to earn a practice-focused doctorate without having to leave nursing for an extended period of time. “I’m always looking for educational opportunities,”



Mary Terhaar, DNSc, RN

Assistant Professor
Department of Health Systems and Outcomes

Area of Specialty:
Neonatal & Perinatal Care

Why did you choose this specialty?
I am captivated by the notion of helping families begin well.

Why is the translation of nursing research important?
It’s important to establish a culture in which professionals keep a questioning stance and consistently apply evidence, translate research, and apply innovation to better care for patients.

Latest project:
I have just designed a new orientation program for newly graduated nurses at Greater Baltimore Medical Center to increase consistency, critical thinking, problem solving, and progressive independence of these new staff members.

How will your project make the world a better place?
Everything we can do to prepare new nurses for a smooth transition, to help them function effectively, to find satisfaction in their work, and to bring the best evidence to practice will prepare them to lead healthcare and enjoy fulfilling careers.

from catheterization, they agreed to more carefully consider ordering and maintaining the catheters for a group of stroke patients.

“The staff had to trust me,” she says, “and they couldn’t argue when I pulled out the literature to show them this was happening.” Social workers and rehabilitation services practitioners were immediately on board with Maygers, as it’s much easier to work with a patient without a catheter. Maygers asked the stroke team of healthcare providers to do two things: try not to catheterize a patient, if possible; and if a patient was catheterized, for it to be removed as soon as possible. “That’s how you go about reducing UTI,” she explains. And so, in the fall of 2009, the Bayview stroke team began to carefully reassess the use of catheters in patients.

Translating Knowledge for a Community

How does EBP translate into improving life for members of a community? Nancy Glass, PhD, MPH, RN, FAAN has worked on domestic violence from Oregon to the Congo, and she’s currently starting a new study to evaluate

if certain procedures are actually working—a common EBP research project.

“We do a safety plan with a woman who is a victim of violence,” Glass explains—and this could be a businesswoman from Oregon or a farmer’s wife from the Congo. This plan involves providing the victim of domestic or partner violence with a roadmap to get herself and others away from a dangerous situation. “But no one has ever looked at if the plan works, or how it works. We are going to systemize the safety plan and tailor information to the individual needs of that woman and her children, and use that study of identify the best way to create a safety plan that works.”

Glass is a big believer in going into communities to do the best work. “We work with communities, and we work for them,” she says, “from violence prevention to cardiovascular health to cancer. Working with women who have been the victims of violence every day is not easy. In Congo, we do not have the resources of a big international aid organization. But there are small things we can do to help a community. We see which things work, and start to scale them up. It’s a team

Brett Morgan, DNP '09, CRNA

Alumnus, Doctorate of Nursing Practice Program 2009

Area of Specialty:

Anesthesiology

Why did you choose this specialty?

Patients entrust CRNAs with providing them a safe surgical experience, from maintaining normal physiologic function and providing relief from pain, to ensuring that they are protected from positioning injuries. This is a trust that I never take for granted, and is why I practice anesthesia.

Why is the translation of nursing research important?

As clinicians we have a responsibility to our patients to provide care that is current, safe, and that has been demonstrated to be the best possible option. Translating research into practice allows nurses the opportunity to expeditiously bring—to the patient or community—that best practice rooted in both the science and art of nursing.

Latest project:

I evaluated a preemptive, multimodal analgesic regiment, given to specific subset of ambulatory surgical patients, for its effectiveness in decreasing pain, among other outcomes.

How will your project make the world a better place?

The inability to control pain is the greatest factor associated with postoperative morbidity. As more procedures move to the ambulatory arena, pain control will be on the forefront of issues involved in the care of surgical patients. Utilizing inexpensive, low-tech, mechanisms for decreasing pain will undoubtedly lead to better patient outcomes and satisfaction, while being responsible in the use of our valuable healthcare resources.



“We work with **communities**, and we work for them, from violence prevention to **cardiovascular health** to cancer. Working with women who have been the victims of violence every day is not easy. We’re not a big international aid organization. But there are **small things** we can do to help a community. We see which things work, and start to scale them up. It’s a **team** effort, and my colleagues make it easier. We have the goal of changing people’s lives in a better way as a priority.”

—Nancy Glass

effort, and my colleagues make it easier. We have the goal of changing people’s lives in a better way as a priority.”

“We go all around the world doing good work,” says Dean Hill. “That’s part of nursing’s legacy.”

Improved Care a “Big Success”

Maygers had hoped to achieve a 10 percent reduction in the number of catheterizations: It turns out that her efforts were almost twice as successful. Patients at Bayview’s stroke center had more than 20 percent fewer catheter use days, and the resulting positive outcomes—a decrease in amount of UTIs and readmission of stroke patients for UTIs, and shorter stays by stroke patients—have been so noticeable that the process is being considered for adoption throughout all of Bayview. Maygers is quick to share credit with the nursing and medical staff and other healthcare providers who joined her initiative, but she’s obviously thrilled with her results, and for the stroke patients who dodged unnecessary infections: “It looks like it’s been a very big success.”

*Balas E.A., Boren S.A. “Managing Clinical Knowledge for Healthcare Improvement.” Yearbook of Medical Informatics 2000: Patient-centered Systems. Stuttgart, Germany: Schattauer, 2000:65–70.

Andrea Parsons Schram, MS, RN, FNP-BC

Student, Doctorate of Nursing Practice Program
Family Nurse Practitioner with David Podgurecki, MD, PA,
Mansfield, Texas
Clinical Instructor, MSN Nurse Practitioner Program, University
of Texas at Arlington College of Nursing

Area of Specialty:

Family medicine, self-management of chronic disease such as type 2 diabetes

Why did you choose this specialty?

What’s exciting about it?

I want to partner with my chronic disease patients so that they may better understand and adapt to the changes required to reduce their risk for complications or a premature death.

Why is the translation of nursing research important?

In my case, I can better evaluate the quality of the research to select treatment strategies that are shown to be effective in helping these patients better manage their chronic diseases.

Latest project:

I am utilizing a behavioral intervention called the 5As intervention to help adult type 2 diabetic patients improve their self-management in the primary care clinic where I practice.

How will your project make the world a better place?

My project will provide evidence that the 5As intervention may be an additional strategy to assist patients in improving their diabetes self-management.



WILL KIRK