In addition to overseeing leading-edge forms of treatment for brain tumors, epilepsy, chronic pain, complex spine injury, and Parkinson’s disease, Warnke is charged with building what he hopes will become one of the best neurosurgery divisions in the country. “We are recruiting both clinical and non-clinical scientists to form a department that represents all neurosurgical subspecialties and focuses on individually tailored treatments,” he says. When it comes to hiring, Warnke is looking for colleagues with more than just technical excellence—each team member must also share his philosophy of surgery and his vision for the division. He believes the key to optimal treatment lies in understanding the basic science of various brain diseases to predict how they will respond to different therapies, such as chemotherapy, radiation, or drugs, and then tailoring each patient’s care accordingly. “My goal is to find minimally invasive treatments that target the specific biology of the disease within the brain, thus sparing the normal brain,” he says. “In order to do that, you need to have a team that understands the biology of the disease: not only technically superb surgeons, which can be found everywhere, but people who have a deeply rooted interest in the biology of the disease they are going to surgically attack.”

Finding surgeons who blur the traditional lines between treatment and research is no simple assignment. But Warnke believes his move to BIDMC from his previous role as professor of neurosurgery and chair at the University of Liverpool in England will provide him with just the right setting for his search. “Bidmc and the Harvard Medical School environment is the medical hub globally,” he says. “The opportunities and potential collaborations are unique, and the very clear commitment of BIDMC to develop these new individually tailored treatments makes this a very attractive place.”

Besides, rising to the task has become something of a sub-specialty for Warnke. “I like the challenge,” he says softly in an accent that hints of three languages, a mix he attributes to an upbringing in Germany and years spent working in the United States and the United Kingdom. Amid these transatlantic wanderings, Warnke honed his surgical skills, earning him prominence in his chosen field. Today, he is one of the few surgeons in the world with particular expertise in interstitial stereotactic neurosurgery. This minimally invasive approach for the treatment of brain cancer uses a technologically advanced imaging and guidance system to direct a source of concentrated radiation directly to the site of the tumor, reducing the damage to healthy brain tissue.

Of these revolutionary neurosurgical techniques, Warnke says, “We are not yet at the stage of curing brain tumors, but we can clearly increase progression-free survival and overall survival in patients in a very significant manner.” At BIDMC, he aims to build upon these successes, harnessing breakthroughs in basic research to continually refine and customize surgical procedures and apply them to other neurological disorders.

Warnke has a lot on his plate at work, and he has a lot on his mind as well. He is associated with the Liebniz Institute of Neurobiology in Germany and is associate editor of the Journal of Neurology, Neurosurgery, and Psychiatry, based in London. He is also transitioning his family—his wife (also a doctor), 12-year-old twins, and a 14-year-old—from Liverpool to their new home in Boston. On the plane rides back and forth between Europe and North America, Warnke plans to pluck The Kite Runner from his shelf and read it, and maybe even toss in a book about baseball. “If I can familiarize myself with the rules, I can become a Red Sox fan!”

The Office of Peter Warnke, M.D., is practically bare. Although stacks of paper are starting to pile up on his desk, his shelves hold just two books: The Kite Runner by Khaled Hosseini and Philip Roth’s Everyman. But Warnke is hardly every man. This internationally renowned brain surgeon recently joined BIDMC’s Roberta and Stephen R. Weiner Department of Surgery as the new chief of the division of neurosurgery and neurosurgeon-in-chief.

BIDMC’s New Chief of Neurosurgery Has a Lot on His Mind
BIDMC’s Medical Interns and residents are in a class of their own. This year, some are taking part in a first-of-its-kind training and assessment course that sets the standard when it comes to teaching interns and residents to insert a central venous line into a patient’s neck or chest using simulation technology.

“The goal of the simulation program is to give interns and residents the chance to practice on a lifelike model, in an environment where they can make errors and ask questions.” says Christopher Smith, M.D., an internal medicine specialist who is leading the study. “We want to ensure that house officers are meeting the standard before they do it; that our interns and residents get the best training in a safe environment by a skilled teacher; and that we establish protocol and a means of measuring competence.”

The first part of the ten-session course has a didactic component where Ennacheril and his residents discuss the central venous line procedure: when to do it, how to do it safely, and the complications involved. Students observe as he performs the procedure before moving to the simulation room for some hands-on training. He also videotapes and evaluates students using a novel scoring system and tracks outcomes. In addition, interns participate in an online quiz and complete a survey to assess their confidence. Smith and his team hypothesize that this simulation and assessment approach will increase confidence, reduce medical errors, and improve patient safety. This training is also one piece of a major hospital-wide effort to reduce central venous infection rates to zero.

“So far results show that residents are more confident in their abilities now than when they first began the course,” says Ennacheril, “so much so that when they first start practicing, it takes them approximately 22 minutes to safely perform the procedure; by end of the program they can do it in 7. We are giving students personalized attention, and by the time they do their Intensive Care Unit rotation, we know they know how to do it.”

Participants attest to the benefits of the program. “It is nerve-wracking to learn any new procedure at first,” says second-year internal medicine resident Laura Fanning, M.D. “The simulator takes that aspect out of the equation.”

“I suffer from serious and persistent heartburn. Antacids provide little and only temporary relief, and it’s beginning to take a toll on my daily life. What are my options?”

The question:

Heartburn—which actually has nothing to do with the heart—is a painful, burning sensation in the chest caused by the exposure of the lower esophagus to the acidic contents of the stomach. Normally, this situation, known as “reflux,” is prevented by the contraction of a small circular muscle called the lower esophageal sphincter (LES) at the junction between the esophagus and the stomach. In heartburn sufferers like you, however, the LES doesn’t work as it should. If reflux occurs frequently, it is known as gastroesophageal reflux disease, or GERD.

Here at BIDMC, we have the only Heartburn Center in the Boston area, where a multi-specialty team of clinicians evaluate and treat patients with the widest range of options, from the non-invasive to the surgical. As a first line of treatment, we would typically recommend lifestyle modifications, including avoiding items like coffee, alcohol, chocolate, and spicy or fatty foods, which tend to exacerbate heartburn symptoms. Liquid and tablet antacids are effective for occasional bouts of symptoms. More potent and very effective medicines are available by prescription, but they can have unwanted side effects like fatigue or abdominal pain. Questions have also been raised about their long-term safety.

The answer:

For the subset of patients for whom medications don’t work, physically or practically, we have a great minimally invasive alternative called endoscopic plication, which restores the proper functioning of the LES. Patients are in and out of the hospital on the same day and back to work on the following day. I have led several studies of this procedure here at BIDMC, which have demonstrated its safety and long-term efficacy. Most of our study patients had excellent relief of symptoms without the need for strong medications.

While the tendency is to trivialize heartburn, studies have found that patients suffering from GERD can experience poorer quality of life than those suffering from most other chronic diseases, including arthritis and diabetes. It can also cause serious complications in the lining of the esophagus, such as Barrett’s esophagus, if left untreated. Don’t be embarrassed or hesitant about seeing a doctor. At BIDMC, we are constantly adding new options to our arsenal for evaluating and treating both heartburn and its complications, including a new treatment for Barrett’s—we’re the only center in New England to have it!

“My completed the teaching session before my ICU month, I was able to perform several central venous line procedures,” said Yoon Kim, M.D., an internal medicine intern. “I was the primary operator from the beginning, and I felt very comfortable.”

Soon every BIDMC intern and resident will be required to take part in this exercise before beginning their ICU rotation, and the model may also be expanded to teach other high-risk procedures.

“At BIDMC we have a mandate to make the system better each year, providing exceptional training to our doctors and excellent care for our patients—the kind of care we would want for our loved ones,” says Smith. “We are now providing a level of education that goes above and beyond what other institutions are doing. Eventually, I think our standards and program will be used to train doctors across the country.”

Douglas Pleskow, M.D., is co-director of gastrointestinal endoscopy at BIDMC and is principal investigator in a number of research projects involving therapeutic endoscopy. Endoscopy is a minimally invasive procedure in which a wire-like tube with a tiny camera is inserted into the body to visually assess, take samples from, and/or apply treatment to an area of interest.
Ruth and Carl J. Shapiro
LEAVING A LEGACY

BETH ISRAEL DEACONESS Medical Center
is at the vanguard of medical education and patient care, and long-time benefactors Ruth and Carl J. Shapiro deserve a large share of the credit.

For more than 20 years, they have been building a legacy of excellence at BIDMC, establishing the Carl J. Shapiro Clinical Center and the Carl J. Shapiro Institute for Education and Research. Their latest contribution, of $5 million, announced at BIDMC’s March 2007 Palm Beach event, will provide continuing support of the education of students, fellows, and residents at the medical center. This gift adds to the $7 million they gave in 2006 to fund renovations to the award-winning Shapiro Clinical Center, making it easier for patients and visitors to get around the medical center’s busiest outpatient building. Of this, $1 million was designated for the expansion of the newly renamed Carl J. Shapiro Simulation and Skills Center (SASC), one of the most advanced and comprehensive medical training facilities in the country.

This state-of-the-art center exemplifies the Shapiros’ dedication to ensuring that generations of patients have access to the most highly trained physicians, nurses, and clinicians. SASC provides Harvard Medical School students and residents with access to a mock operating room, emergency room, intensive care unit, and surgery floor. Advanced sensors and computer equipment allow faculty members to provide detailed feedback on student performance. In addition, the center features sophisticated audiovisual equipment, interactive mannequins, and virtual patients enabling current physicians and other clinicians to hone new skills and techniques.

“This project is an example of the kind of philanthropy that we’re very proud of at BIDMC,” says Dr. Robert Langer, president and CEO of the medical center. “The Shapiros have been leaders in this area for many years, and we are honored to have them as such a vital part of our institution.”

SASC is formally accredited as a Level 1 facility by the American College of Surgeons, making it the first such facility in New England and just one of seven inaugural certified centers in the United States. “The SASC is a prime example of how our leadership position in education improves the capabilities of our physicians to deliver high-quality, compassionate, safe care for our patients, and enables BIDMC to create new knowledge regarding the best methods for training doctors of tomorrow,” says Dr. Stephen Schwartzstein.

The Shapiros are recognized in the Boston community for their philanthropy, but they are particularly celebrated among members of the BIDMC community: they have given more than $25 million to BIDMC over the years.

“Carl and Ruth Shapiro are two of BIDMC’s closest long-time supporters,” says Paul Levy, president and CEO of the medical center. “We are honored and delighted by their continued generosity.”

The Shapiros are equally happy to help advance the medical center’s mission. “Beth Israel Deaconess has taken care of four generations of our family, and these gifts are one way we can give back so much to the hospital that has done so much,” says Carl Shapiro. “We are pleased to be a part of the medical center’s continued commitment to excellence in science, medicine, and service to the community.”

Their recent gifts are further evidence of their deep concern for others and their desire to make a positive impact on the quality of health care in the community.

Says Lois Silverman, chair of the Board of Directors at BIDMC, “Their giving shows their belief in the mission of this institution, in the finest education, the most up-to-date research, and the best delivery of clinical care. It’s an ongoing generosity that continues to make a difference in the Boston community, and for that, we at BIDMC are very grateful.”

Parkinson’s Research Gets a Boost
This past December, an anonymous donor generously gave more than $300,000 to Beth Israel Deaconess in support of its research efforts in Parkinson’s disease, a degenerative disorder that affects nerve cells in the part of the brain controlling muscle movement. In particular, the funding will provide seed money for the development of novel therapies for this disease, including competitive grant support for various basic physiological and pharmacological studies to prepare new drugs for testing in human beings. While crucial to bridging the gap between the laboratory and clinical testing, these types of preliminary investigations do not normally receive federal or agency funding.

“We have exceptional basic scientists who are working on innovative ways to approach Parkinson’s and an outstanding clinical trials group, but we need to make the link between the two,” says Clifford Saper, M.D., Ph.D., chair of the department of neurology and an expert on the brain circuitry involved neurodegenerative diseases. “Our goal here is to shorten the path from discovery to routine patient care, and we are most grateful for this support, which will help us do just that.”

Supporting A Doc, Honoring a Dad
When their father, Arthur Gilbert, M.D., passed away in April 2006 after a long battle with prostate cancer, Randi Cutler and Pamela Remis wanted to do something special to honor his memory. This fall, they—together with their husbands, Joel Cutler and Richard Remis—each decided to give $100,000 to support the prostate cancer research efforts of Glenn Bubley, M.D., their father’s physician. The Cutlers and Remises believe Bubley’s compassion and skill prolonged their father’s life and improved its quality right up until his death. “Dad made our life considerably richer by sharing his wisdom, strength, and love until his last day,” says Randi Cutler. “He was lucky to have received such great care from a fabulous doctor.” The new funding will support the basic science and clinical investigations of Bubley and his team to find more effective and less debilitating ways of treating prostate cancer in the future. Says Pamela Remis, “It was important for us to support a physician like Dr. Bubley for whom successful treatment was not only about the effectiveness of a certain therapy or drug but about preserving a patient’s dignity and quality of life. That was something that truly resonated with Dad and made Dr. Bubley not just a doctor but a personal friend to our family.”

Taking a Swing at Cancer
Finding a way to honor the memory of a loved one is never easy, but when Roselyn Garber’s husband, Lou, passed away in 2002, she knew just what to do. Every year for the past four years, Garber has organized a golf tournament—the Garber Golf Outing, benefiting cancer research at Beth Israel Deaconess Medical Center. As president and CEO of Garber Travel, she invites her clients, staff, and vendors to participate in the charity tournament and raffle. All proceeds raised support the research of Lou’s long-time physician Roger Lange, M.D. In 2006 alone, the tournament raised more than $33,000.

“I am pleased to organize this tournament each year in memory of my husband,” says Roselyn Garber. “Dr. Lange first treated Lou almost 30 years ago and was with him again for his cancer diagnosis in 2001. I am doing what I can to support cancer research and ensure that someday other families won’t have to lose a loved one to this terrible disease.”
“I've always been interested in the notion of: How do we do the things we do? How do we think? How do we feel? How do we know that we are we?—these sorts of things,” he says. “Being able to stimulate the brain of awake subjects becomes a fantastic opportunity to study these kinds of questions.” It may also offer new hope for patients suffering from disorders as varied as depression, epilepsy, and stroke.

Pascual-Leone’s research capitalizes on the idea that the brain isn’t as rigid and inflexible as once thought. Back in the 80s, he was involved in pioneering work in epileptic patients that helped prove that the brain is “plastic,” adapting continuously as we go about our daily lives. While his goal at first was to map areas of the brain that controlled certain critical functions, like language and memory, Pascual-Leone became intrigued with the possibility of exploiting the brain’s adaptive abilities for therapeutic purposes. “This capacity for dynamic change is a double-edged sword,” he notes. “There is no reason to believe that the changes will be good. So the challenge is not to activate plasticity—there’s nothing to activate; it’s already on—but rather to guide it, to suppress those changes that are going to hamper recovery or promote disease and to enhance those changes that are going to promote health.”

So how exactly do you go about altering how the brain works? Because brain cells, or neurons, communicate through a process controlled by electrical and chemical signals, applying an electric current to an area of the brain can affect how these cells do their job. In the past, the only way to study these effects was to place an electrode directly on the brain itself in patients already undergoing open-skull surgery. But with the advent of high-speed electronics and advanced imaging came a new, noninvasive technique called “transcranial magnetic stimulation” (TMS), which has become the cornerstone of Pascual-Leone’s research. TMS uses a high-speed electrical device held near the head to generate a magnetic field, which in turn creates a current far below the scalp’s surface. “So really magnetic stimulation is a misnomer,” says Pascual-Leone. “It’s not the magnetic field that stimulates. It’s only bridging the skin and the skull and then inducing current in the brain.” By aiming this current at certain specific areas of the brain, researchers can stimulate or block the activity of certain neuronal pathways that may be involved in disease.

With TMS, combined with advanced imaging like MRI scans to view its impact, Pascual-Leone has gleaned a wealth of information about how brains—both healthy and ailing—function. More importantly, he has created a therapeutic option that can be guided both by the disease itself and how it manifests itself in a specific patient, reducing potential side effects and increasing efficacy. “And what is particularly appealing to me,” he notes, “is the idea that if we can do this in one condition, then I think we can assume that we can probably do it in any other condition as long as we know what the network is that needs to be targeted and in what direction it needs to be affected.” That, of course, is the trick. But already Pascual-Leone, one of a handful of U.S.-based researchers using this technology, has shown encouraging results in depression, stroke-related disorders, epilepsy, autism, and chronic pain, to name a few, and has just begun exploring new targets in addictive behaviors.

Pascual-Leone’s accomplishments have recently caught the eye of the press and philanthropists alike. Just as articles on his work graced the pages of Time and Newsweek, longtime supporters of BIDMC, Helaine Berenson Allen and Theodore Berenson, pledged a $1 million gift to create the Berenson-Allen Center for Noninvasive Brain Stimulation at the medical center, which Pascual-Leone will direct. “My brother and I were extremely impressed with the depth and breadth of Alvaro’s work,” says Allen. “Given our long relationship with Beth Israel Deaconess, we weren’t surprised at all that this kind of innovation and creativity was taking place at the medical center.”

Pascual-Leone, who says he is “indebted” to Allen and Berenson for their generosity, believes that scientists today also need to be practical business people, who have an obligation to realize a return on any investment made on their work. “And as an aspect of the return, of course, do the ideas translate into something that helps people—at least that’s my own measure of accountability,” he says. “But the other is do they help generate more funds to train people, pursue more studies, develop new technologies, and so forth. So I see this as the kind of gift that will prove to be a fantastic return on investment at all those levels.”

While he hopes that the creation of the new center will inspire others to support his work, Pascual-Leone is already thankful for the reward that few cognitive neurophysiologists have ever received—translation of his scientific efforts into successful clinical applications. As the FDA considers the approval of the use of TMS for the treatment of depression and other diseases, he smiles, “It’s a really unique gift that patients give us in allowing us to take care of them and to apply some novel ideas to their care.”

“Given our long relationship with Beth Israel Deaconess, we weren’t surprised at all that this kind of innovation and creativity was taking place at the medical center.”
Carol Mayer
LENDING A HELPING HAND

IF THERE IS ever a good day to receive chemotherapy, BIDMC’s patients know that Tuesday is the day. Part of what makes Tuesdays so special is the presence of Carol Mayer. She has been volunteering on Shapiro 9, the chemotherapy floor, every week on this particular day for more than 17 years. She knows all the volunteers, doctors, and nurses by name. Patients know her for her warm smile, compassionate word, understanding ear, and of course, her cheese and crackers platter and a freshly baked array of cookies, breads, and lemon squares, which have become a favorite on the floor.

“I really enjoy my Tuesdays,” says Carol Mayer affably as she makes the rounds, bringing one chemo patient a cup of coffee with milk and one sugar, and another a homemade chocolate chip cookie and slice of cranberry bread. “There are wonderful volunteers on Shapiro 9 every day, but I don’t bake and bring cheese and crackers every week; I alternate with the other volunteers.”

In truth, Mayer contributes much more than nourishment to Shapiro 9’s cancer patients. She helped to build Patient-to-Patient, Heart-to-Heart, a volunteer program in which cancer survivors lend support and empathy to cancer patients.

“We are a group of people who completed treatment and training, and now we volunteer in the chemo unit,” says Mayer, a two-time cancer survivor who describes herself as “lucky.” “We talk with patients, serve lunches and offer snacks, and do whatever we can to free up the nurses. The doctors and nurses here care about what they’re doing, and they care about the patients — how they feel physically and emotionally. We want to give back to the hospital and staff that have taken care of us over the years.”

It is these sentiments that led Mayer and her husband, Robert, to also commit significant financial resources to the cancer care program at BIDMC. They made a gift to endow Windows of Hope, a specialty shop offering products and resources designed for cancer patients. Open since 1999, the shop has become known as a warm and supportive place, a place where patients gather to share stories of hope and inspiration. Mayer often stops by on Tuesdays to chat with the store’s staff and share her straight-from-the-oven sweets.

Married now for nearly 50 years, the Mayers made a significant planned gift to the medical center, the proceeds of which will be designated toward cancer care initiatives.

They also recently made a gift to support the purchase of two ambulances for BIDMC’s exclusive use to transport patients between the east and west campuses and BID-Needham. The gift is causing a lot of excitement in the BIDMC community.

“This was an extraordinarily generous gift and an important one” says Jayne Sheehan, senior vice president of ambulatory and emergency services at BIDMC. “The ambulances will be equipped with state-of-the-art medical technology, provide the medical center with significant budgetary savings in the years to come, and offer patients a seamless transfer and consistent care.”

Mark Zeidel, M.D., chair of the Department of Medicine, is equally happy with the new vehicles, which “are elderly, but many of whom are very young.”

Though the Mayers hesitate to discuss their philanthropy in public, they know the significance of giving back to their community and are eager to pass the concept along to their four children and eight grandchildren. Their legacy is unfolding before their eyes.

One of their granddaughters recently asked friends and family to contribute to Windows of Hope instead to hand them out. and after receiving her own cancer scare, their daughter established Judy’s Hope, a fundraiser to support the Division of Hematology/Oncology at BIDMC.

As Mayer returns to the kitchen to gather food for another round of deliveries, the steps and looks around the ward. The nurses bustle about; machines pump potent medications into the bloodstream of each patient, some of whom are elderly, but many of whom are very young.

“Bob and I are proud of our family,” says Mayer seriously. “We are so glad to help.”

Judy’s Hope will be held this year on April 29. For more information, please contact Judy Kaufman at 617-969-2599 or judyskaufman@comcast.net.
Glenn Bubley, M.D., Lowell Schnipper, M.D., and Esteemed BIDM Concologists Marc Garnick, M.D., on October 24, 2006 at the Lenox Hotel in Boston. BIDMC’s first Prostate Cancer Educational Breakfast.

Cancer physicians, survivors, and patients attended BIDMC’s first Prostate Cancer Educational Breakfast on October 24, 2006 at the Lenox Hotel in Boston. Esteemed BIDM oncologists Marc Gamik, M.D., Glenn Balley, M.D., Lowell Schipper, M.D., and surgeon William DaWit, M.D., shared their expertise, inspiring and informing the audience. This event, co-chaired by Gabe Schmergel and Garth Gannick, exemplifies BIDM’s excellence in education and dedication to compassionate care. A second prostate cancer educational breakfast will be held this spring.

Postdocs name BIDMC one of the best places to work! A national survey of postdoctoral life scientists named BIDMC one of the top places to work. The survey results—published in the March edition of The Scientist magazine—ranked 96 institutions across North America and put BIDMC in 28th place, ahead of every other institution in Cambridge and Boston. The magazine’s online questionnaire, “Best Places to Work 2007: Postdocs” polled readers about conditions in their research facilities.
director of Cancer Center announced
renowned cancer researcher Lewis C. Cantley, Ph.D., was recently named the director of BIDMC's Cancer Center. He and his wife, Vicki Sato, Ph.D., also made a gift of $50,000 to support cancer research at the medical center, illustrating the level of confidence they have in BIDMC's ability to make meaningful strides against the disease. Cantley's discovery of a pathway called PI3K, which drives the growth of most human cancers, has already made a profound impact: the majority of new cancer drugs in development by pharmaceutical companies target this pathway.