



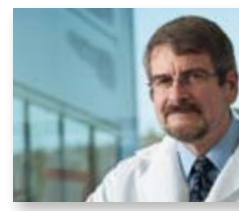
Resveratrol—a new supplement that may help you live longer
Page 3



John E. "Jack" Wennberg Receives the 2008 Gustav O. Lienhard Award
Page 4



The ActiveStep Treadmill: improving patient balance and preventing falls
Page 6



Specialized care in the newly formed DHMC's Department of Neurology
Page 7

Skylight

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ABOUT THE PEOPLE AND PROGRAMS AT DARTMOUTH-HITCHCOCK MEDICAL CENTER

Helping Patients Make the Best Medical Decisions

Dale Collins, MD TDI's New Director of the Center for Informed Choice

"I want to feel confident my patients are making good decisions," says Dale Collins, MD, the newly named Director of the Center for Informed Choice at The Dartmouth Institute for Health Policy and Clinical Practice (TDI). A plastic surgeon who specializes in breast reconstruction, Collins will bring a clinical perspective to the development and implementation of shared decision making for patients facing tough medical issues. "Patients receive better care when they take an active role in decisions about their health. They need to be informed to make good decisions, and good decisions vary from patient to patient. Because patients have different values, there is no right or wrong choice of treatment, but a best choice that is unique to each person," Collins says.

A researcher as well as a surgeon, Collins came to Dartmouth in 1995 to study Outcomes Research with John "Jack" Wennberg, MD, founder of The Center for the Evaluative Clinical Sciences, now known as TDI. Collins earned her Masters of Science while practicing at Dartmouth-Hitchcock Medical Center. In 1999, she joined the Norris Cotton Cancer Center (NCCC), as the Medical Director of the Comprehensive Breast Program, an interdisciplinary clinic that integrates patient education materials with



decision-making aids for women diagnosed with breast cancer. "It's difficult for patients to absorb and integrate information, especially when they have just received a serious diagnosis. Patients need good information to make good decisions, and they need time to absorb it." In her recent research, Collins has proven that giving patients decision-making tools that take into account a patient's values as well as possible outcomes helps patients make the best choices on a case-by-case basis.

"A clear example of patient preference would be a woman choosing a mastectomy instead of a lumpec-

tomy," Collins explains. "Clinically, they're the same, but emotionally, they're not. Some women chose breast reconstruction, others don't. These are important decisions that only the patient can make."

One of six centers of excellence at TDI, the Center for Informed Choice (CIC) is dedicated to making patients partners in care through shared decision making and informed choice, which is decidedly not the same as informed consent. The three main goals of the CIC are: 1) to create pioneering educational programs about the theories, measurement methods, and research designs involved in (Continued on pg. 2)

Masimo Patient SafetyNet: Improving Rapid Response and Patient Outcomes



Why tell this story? Because balancing a patient's post-operative medications—for pain, nausea, anxiety—can be challenging, and the wrong mix can put a patient at risk for respiratory depression and even death. Under the leadership of George Blike, MD, Quality and Safety Officer, DHMC recently took a major step to improve patient safety with the installation of a system called the Masimo Patient SafetyNet on floors 2, 3, and 4 West.

The Patient SafetyNet process is quite simple: the nurse attaches a "probe" (which looks like a small adhesive bandage) to the patient's finger and sets parameters for heart rate and oxygen levels.

A patient, mid-50s, on some pain medications but with an unremarkable medical history, comes in for an elective total joint replacement. The night following surgery the patient sleeps soundly, so doesn't push the pain button, and consequently awakes in a lot of discomfort. The night nurse changes the pain cassette and administers a long-acting oral narcotic. The patient goes back to sleep. The night nurse files her report—of her five patients, this is her least acute, least worrisome case—and gives it to

The probe continuously measures and transmits the information to monitors. If there's a problem, an alarm—lasting fifteen seconds—sounds in the patient's room. If the problem is not resolved within those fifteen seconds, the system pages the nurse. If the nurse doesn't answer the page within thirty seconds, the system notifies a second nurse on the floor, as well as the charge nurse. Within forty-five seconds of a patient's oxygen level or heart rate falling below, or rising above, the pre-set levels, at least three people have been alerted. Masimo Patient SafetyNet provides "surveillance" monitoring, not the standard "condition" monitoring. In other words, this system

the day nurse. Later, as the day nurse is getting ready to do his rounds—which can take an hour, and he will see this patient last—an alarm sounds in the patient's room. Within fifteen seconds the nurse responds, sees that the patient's oxygen level is dropping rapidly and observes that the patient seems very sleepy. He calls the Hitchcock Early Response Team (HERT), which administers a drug to reverse the effect of the narcotic. The patient recovers, suffers no ill-effects, never leaves the floor, and is discharged with no delay in the hospital stay.

monitors all patients, not just those known to be at risk. Prior to installation of this system, in a situation such as the one described above, the problem might have gone undetected for an hour, at which point the patient could have required intubation, a transfer to the ICU, and, had the oxygen deprivation been prolonged, possibly suffered brain damage or even death. This happens all too often in hospitals across the country.

While Blike initiated the Masimo project, he is quick to point out that an interdisciplinary team of nurses, physicians, vendor representatives, quality improvement staff, information tech- (Continued on pg. 2)

“Our goal is to help patients make choices consistent with their values—what’s uniquely right for them.”

Dale Collins, MD



studying shared decision making; 2) to investigate fundamental and applied research questions in key aspects of the shared-decision making process; and 3) to design and test innovative clinical practice models that incorporate shared decision making as an integral part of care.

“Dartmouth is the only academic center in the world with a hospital-based clinical and research center for shared decision making,” Collins says. As director, she plans to promote research, to educate medical students and clinicians, and to promote the results of CIC’s research to improve patient care and healthcare policy.

Collins will be aided by co-director Hilary Llewellyn-Thomas, PhD, Professor in the Department of Community and Family Medicine, who specializes in designing research projects and teaching research techniques to investigators. “While some of this research takes place in the laboratory and classroom,” Llewellyn-Thomas explains, “most of it takes place in the clinical setting. It’s great to have a clinical leader like Dale to lead CIC. She really under-

stands the importance of fostering individual-based, patient-sensitive, and rational approaches to decision making. Changing systems and getting new information and tools to patients require clinical champions like Dale, who are willing to rethink and redesign clinical work flow patterns to accommodate new ideas in education, research, and practice.”

Collins’ work with the Comprehensive Breast Cancer Program at NCCC has made her a national leader in implementing a shared decision-making process into comprehensive, coordinated patient care. At CIC, Collins plans to build on that work. “We need to do research around what are the right questions to ask: what’s important for the patient to understand? How do we help people integrate their personal values into their decision making? Our goal is to help patients make choices consistent with their values—what’s uniquely right for them.” In her work as a surgeon, Collins has used Patients’ Decision Aids – tools designed to help patients understand their disease and their own preference for treatment based on their thorough understanding of their core

values along with the likely outcomes of the different options available.

Several departments at DHMC already have shared decision making processes in place for a variety of choices patients face, ranging from deciding to undergo cancer-screening procedures to decisions about palliative care. A link from the Spine Center’s web-page, for instance, leads to informational videos and DVDs available on loan, web-based decision aids, and a healthcare decision guide for patients with low back pain. Properly informed patients and their physicians can then decide on the best course of treatment for a particular problem at a particular time.

In addition to research, CIC’s mission includes translating results into the clinical setting, and influencing policy that will ultimately reward those clinicians who provide good information that helps patients make the medical choices best for them. Collins looks forward to the day when a medical center’s use of a shared decision-making process becomes one of the measures of an institution’s quality of care.

MASIMO (FROM PAGE 1)

nology staff, and researchers from the Thayer School of Engineering implemented it. Jean Avery, Clinical Quality Associate, facilitated the project. Nancy Karon, Nurse Manager on 3W, Mary Catherine Rawls, Clinical Nurse Specialist, Surgery and Surgical Specialties and Mike Perryman, a staff nurse, were leaders in piloting the system. Karon describes how the nursing staff helped problem-solve and made recommendations, such as the type of probe to use, which digit to attach it to, and, most importantly, the implementation of the fifteen-second delay. “A nuisance alarm,” Karon states, “will kill a project.”

“That fifteen seconds has made the difference in nurse acceptance,” Rawls adds, “because there are fewer false alarms they have to respond to.” She notes that nurses can get “immunized” to constant beeping. That initial fifteen seconds gives the patient time to correct what might simply be an unplugged probe or a finger being squeezed as they shift themselves in bed or open a milk carton. Knowing this, when the nurse does get beeped, he or she will

respond much more quickly. “One of the goals,” Karon says, “was to have a system that was patient-friendly, as well as nurse-friendly. We initially didn’t have the fifteen second delay. Within two days we put it in.” Josh Pyke, BA/BE and Klaus Christofferson, PhD, of the Thayer School, did observational studies to determine what triggered the alarm and how the nurses responded. Rawls calls it, “one of the most successful introductions of new equipment” for the hospital.

DHMC has measured that success in fewer rescue calls (a 70% reduction in the first year, and, when HERT is needed, the earlier contact results in far better outcomes for patients), and fewer ICU transfers (a 48% reduction), freeing the ICU for more critically ill patients, lowering patient-care costs, and improving patient care as well as nurse, patient, and family satisfaction.

Mary Catherine Rawls, Clinical Nurse Specialist, was one of the leaders in piloting the Masimo Patient SafetyNet system, for improving rapid response and patient outcomes.

Within forty-five seconds of a patient’s oxygen level or heart rate falling below, or rising above, the pre-set levels, at least three people have been alerted.





Long Live the Baby Boomers... and Beyond

A combination of healthy lifestyle and a few key over-the-counter supplements—especially the plant compound resveratrol—can keep people more or less in their current condition for another 20 years.

Christopher Wiley, MD, is a perfectly reasonable man:

an associate professor of anesthesiology who is a full-time clinician; a baby boomer in good condition; someone who would like to live in the same good health for another hundred years or so. What's that—who alive today has any hope to live well over a century?

Actually, in Wiley's view, today's young people and even some baby boomers can reasonably have that expectation. A combination of healthy lifestyle and a few key over-the-counter supplements—especially the plant compound resveratrol—can keep people more or less in their current condition for another 20 years. By that time, research now underway on the seven basic forms of cellular aging will very likely produce results that can extend a healthy life for another 20 to 30 years. Wiley's most astonishing projection—looking approximately 50 years into the future—is the advent of a medical nanotechnology that will diagnose and repair the most minute parts of the human body. In this futuristic scenario, people will be able to live for hundreds and hundreds of years.

Wiley, who came upon ideas of extreme life-extension first put forward by computer scientists, says, "I've been interested in the future for a long time." He presented the topic at a Grand Rounds in Anesthesiology, soon followed by a seminar in Pathology. DHMC physicians were intrigued and spread the word to their colleagues elsewhere, resulting in several additional lecture invitations. Wiley also lectures on nanotechnology in the future of medicine at Thayer School of Engineering. Fast becoming known as a futuristic thinker himself, he insists that he is not on a mission to convert the world to his way of thinking.

His lays out a three-part strategy that people can start at any age, although the young and healthy stand to benefit the most. For starters, it's what everyone is taught: eating well, exercising, and avoiding bad habits and risky activities. Add to these basics a few readily available supplements: anti-oxidants, Omega-3, -6, and -9 fatty acids, and the new supplement resveratrol, a compound found largely in the skins of red grapes.

Resveratrol appears to mimic the effects of caloric restriction, which is the only intervention that has been shown in all species studied to extend a healthy life span. It does so by improving the activity of a family of proteins called sirtuins that alter cellular metabolism in several helpful ways. Organisms, including humans who restrict calories by 30%, are shown to extend life spans by 30%. But the search is on for so-called "caloric restriction mimetics" that are even more potent than resveratrol. "Resveratrol is not going to get you to centuries," Wiley says. "What you're attempting to do is buy yourself another 20 years of reasonably good health, slow down the aging process, so you're in the best possible shape 20 years from now."

The second part of this strategy confronts the basic science of aging, which involves very complex reactions in the human body. "There is a continuing process of damage simply by the fact that we are living," Wiley says. Scientists have identified only seven types of cellular damage that bring disease, disability, and degeneration. "If the damage that occurs over our lifetimes is this set of seven things, and there are promising strategies in development for each one,

there becomes a realistic way to start having interventions that have a real impact on aging," he says. Given current rates of progress, it is very likely that there will be early regeneration or anti-aging interventions available within two decades or less.

Wiley would like to be part of the future 50 years from now when he believes things will get very interesting, exponentially speaking, "off the top of the charts." Like Wiley some futurists expect that people will live hundreds of years, perhaps even thousands. "By then we will have almost certainly mature nanotechnology that will allow us complete control over our bodies at the finest level of detail, and it will be possible to detect cancer or any other problem when a single cell or two has become abnormal," he says. "Life is an example of nanotechnology, confined to organic molecules. Instead of relying on the blind watchmaker of evolution, we will have our brains directing conscious choices as to how to arrange things."

The third stage of this new extended life span will be easy for younger people to reach, Wiley believes. "Our children may live several centuries if they choose. For a baby boomer like me, I'm going to have to be lucky to catch the last car of the train as it pulls off into the future."

Resveratrol in red wine comes from the skin of grapes used to make it. Because it is fermented with grape skins longer than white wine, red wine contains more resveratrol. Some studies have suggested that simply eating grapes, or drinking grape juice, are ways to get resveratrol without drinking alcohol.





John E. "Jack" Wennberg Receives the 2008 Gustav O. Lienhard Award

JOHN E. "JACK" WENNBERG, MD, the Peggy Y. Thomson Chair for the Evaluative Clinical Sciences, and the founder and director emeritus of The Dartmouth Institute for Health Policy and Clinical Practice (TDI), has received the 2008 Gustav O. Lienhard Award from the Institute of Medicine (IOM) for "reshaping the U.S. health care system." The IOM annually confers the Lienhard Award in recognition of "outstanding achievement in improving healthcare services in the United States."

Wennberg was chosen for his "impact on the evolution of health care delivery in the United States," said IOM President Harvey V. Fineberg. "His painstaking documentation of deep, regional differences in healthcare delivery and quality provided the foundation for many important changes in health care, including increasing recognition of the importance of evidence-

based medicine to guide healthcare delivery and the movement toward patient-centered care. He is a man of courage, steadfast determination, and keen intelligence whose work is the basis for many improvements in health care quality and efficiency."

Wennberg came to Dartmouth in 1980 after developing "small area analysis," a method of determining population-based rates for utilization and distribution of healthcare services. In a now famous study, Wennberg and colleague Alan Gittelsohn discovered that in the late 1960s, children in Morrisville, Vermont had vastly more tonsillectomies than children in nearby Waterbury. With no evidence of an outbreak of tonsillitis in Morrisville, Wennberg traced this discrepancy in care to a group of Morrisville doctors keen on the procedure.

Wennberg's method of small area analysis proved that the American medical system, which pays

James W. Varnum Quality Health Care Award

Rewarding Excellence

Three individuals were selected to receive the second annual James W. Varnum Quality Health Care Award for their dedication to creating and sustaining an environment of high-quality, patient- and family-centered care at Dartmouth-Hitchcock. The award was named after Jim Varnum, former president of Mary Hitchcock Memorial Hospital, because of his visionary leadership to ensure Dartmouth-Hitchcock provides the highest quality of care. The Trustees of Mary Hitchcock Memorial Hospital established the James W. Varnum Quality Health Care Endowment upon Varnum's retirement in 2006. Annually a ceremony is held for the winners, where excerpts from the recipient's nomination letters are read and they are each presented with a gift of \$5,000. Because of the generosity of many donors to this Endowment, the Varnum Quality Health Care Award program is possible.

GEORGE BLIKE

Professor of Anesthesiology for DMS, and Quality and Patient Safety Officer for DHMC

This past summer, George Blike, MD, accepted the position of Quality and Patient Safety Officer for DHMC, continuing to build upon the foundation he set as Medical Director of the Office of Patient Safety to help implement the hospital's vision to become a "Leader in Quality and Patient Safety." A practicing anesthesiologist for over 15 years, Blike trained at Yale New Haven Hospital and joined the DHMC staff in 1992, rising up the academic ranks to his current position as Professor of Anesthesiology.

His accomplishments to date in the realm of improving patient safety include the design and implementation of the CHaD PainFree program, which was the first of its kind in the nation, putting DHMC on the map for its ability to offer pain free services to children undergoing invasive and traumatic radiology procedures. This system is key to saving patients in distress by alerting nurses to falling O2 saturations and has been presented at the National Patient Safety Conference.

His most recent work in his new role has received much attention recently with the opening of the new Patient Safety Training Center, the 8,000 square-foot,

multidisciplinary simulation training center that provides patient safety training to all clinicians and employees in a safe environment. Under his leadership and coordination, the center was opened last fall, becoming one of the largest simulation centers in the country and providing a model for other academic institutions interested in deploying such programs.

In addition, Blike spearheaded an effort to have Lucian Leape, MD, (often referred to as the godfather of the patient safety movement) come to DHMC for a day-long series of events that engaged staff and leaders in an authentic dialogue of what it will take to be true leaders in patient safety. These major milestones in our Quality and Patient Safety effort have served as a catalyst to make a genuine culture change – to become a culture that empowers all clinicians, staff and leaders to embrace accountability for their actions without blame, to respect each other and speak up when needed, and to work in a truly engaged team environment that puts the safety of our patients first.

According to his nomination letter, Blike truly exemplifies an organization-wide commitment to providing exceptional quality, patient-centered care. He has been a key leader in changing the culture at DHMC, leading the way with a philosophy of transparency and fostering patient-centered care

values throughout the organization. He has significantly and directly contributed toward developing and promoting a systems-based approach toward improvements in quality of care, inspiring employees to systematically integrate and align their quality improvement efforts throughout the organization.

SHERRY CALKINS

Public Affairs and Marketing Coordinator for Community Health Improvement and Benefits

Sherry Calkins has been passionate about DHMC for all of the 25 years she has worked here. She currently collaborates with members of the community in the planning and implementation of new initiatives, providing support for model programs and measuring outcomes for the office of Community Health Improvement and Benefits. She helps nurture long-term partnerships with community-based organizations and contributes to building social capital through community relations.

According to one of her two nomination letters, while Calkins doesn't provide direct patient care, through her work, she directly improves the health of the people we serve in the Upper Valley, acting as a wonderful ambassador for DHMC.

In terms of institutional goals, Calkins' work in Community Health Improvement is designed to "attract and engage others" by building essential partnerships and convening group and community resources at the local, regional and national levels. Her work with community outreach activities such as Mapping the Addiction Maze to the annual Community Health Fair, are in line with the institution's vision to "achieve the healthiest population possible."

Whether she is writing content for the community pages published in the Valley News, bringing together regional resources for networking opportunities, or being active in the local Lebanon-Riverside Rotary Club, Calkins is always representing the positive attributes of DHMC to the outside world, fostering connections and partnerships. As president of the Rotary Club for 2007 and 2008, she helped

physicians for piecemeal, actually encourages expensive and unnecessary medical treatment. Wennberg applied his methods to national medical use, and with Elliott Fisher, MD, MPH, Associate Director for Health Policy and Population Health at TDI, published the first Dartmouth Atlas of Health Care in 1996. The Dartmouth Atlas plots geographical variations in medical practice and cost. Using utilization and reimbursement data from Medicare, Wennberg and colleagues have demonstrated significant differences in care across the country. People in Minnesota, for instance, use fewer medical services than people in southern California—fewer tests, fewer doctor visits (including visits to specialists) and fewer days in the hospital. People in Minnesota also have measurably better health than the overtreated Californians, and they express significantly greater satisfaction with the care they received.

The Atlas team has defined “supply-sensitive care” as care based on availability of physician or hospital services. As with the early examination of tonsillectomy rates in neighboring communities, the Atlas

demonstrates that surgical or hospitalization rates are often higher in a particular geographic area simply because more specialists or hospital beds are available locally.

Another cause for practice variation is “preference-sensitive” care. Preference-sensitive care, according to Wennberg, is “for conditions where legitimate treatment options exist; where the treatment options involve significant trade-offs in the patient’s quality and length of life; and therefore the choice of treatment should be decided upon by the fully informed patient in partnership with the physician.” An example of preference-sensitive care is when a woman chooses a mastectomy over lumpectomy in early-stage breast cancer. Both options have risks and benefits. The choice, Wennberg argues, should take into account the patient’s preference.

This belief in patient-centered care led him to become a leader in the new field of shared decision making, where patients receive objective information about risks and benefits of medical treatment, allowing them to participate fully in choices about their care. Wennberg says, “It’s important for patients to understand

that options exist for almost every treatment decision—including the option to do nothing.” With James Weinstein, DO, MS, he founded the first-in-the-nation Center for Shared Decision Making at Dartmouth-Hitchcock. He also co-founded the Foundation for Informed Medical Decision Making, a non-profit corporation providing objective scientific information to patients about their treatment choices, using interactive media.

Currently, Wennberg is finishing a book that reviews the research on informed consent while he continues to advocate for developing national policies that will incorporate outcomes-based research into primary practice. Such policies would include significant changes to the current method of fee-for-service payment for physicians’ services. Instead, it would pay doctors for maintaining patient health rather than for the volume of patient visits or the number of procedures and tests ordered. The aim of such policy changes is to reduce the cost of health care, eliminate practice variation for economic reasons, and include shared decision making as

part of informed consent.

Wennberg has now spent almost forty years pioneering outcomes research and patient-directed care. The Lienhard Award is just the most recent honor in a long career that continues to probe the intricacies of the American healthcare system and to propose reforms that can save money, improve care, and empower patients. His latest project, a white paper entitled *Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration*, has drawn widespread attention in Washington, DC, as policymakers focus on remaking the U.S. healthcare system.

In their nomination of Wennberg, Uwe E. Reinhardt, professor of economics at Princeton University, and Michael Zubkoff, MD, chair of the Department of Community and Family Medicine at DMS, wrote that Wennberg “has almost single-handedly altered the debate in health policy.” And he’s not done yet. As Wennberg says, “Looking back is not something I’m doing right now.” He continues to pave the way for reasoned reforms, economic efficacy and higher standards of health care.



GEORGE BLIKE



SHERRY CALKINS



PETER NOLETTE

the club focus on community service that complimented the work at DHMC, involving members in the Community Health Fair.

In addition, she finds ways for DHMC to support local innovative programs such as the Grafton County Drug Court Sentencing Program that offers addicts an opportunity to participate in an intense, court supervised rehabilitation program for two years instead of going to jail.

She has been instrumental in organizing the youth of our region to visit DHMC to experience first-hand what it is like to work at a hospital, offering them the prospect of a career in health care upon graduating, and planting the “seed” for our potential future workforce.

Calkins has proven that she is someone who, while never seeking recognition herself, works hard, loves what she does and is here to represent DHMC with the best possible qualities of loyalty, passion, humor, integrity and an unwavering work ethic.

PETER NOLETTE

Office of Professional Nursing, Staff Nurse
Wound Specialist

Peter Nolette, RN, BSN, MBA, began his nursing career in 1977 as a graduate of the Mary Hitchcock School of Nursing. Except for a brief period, he has

spent his entire career at DHMC, working in different roles over the years including as a staff nurse for Pediatrics, Coronary Care, Radiation Oncology and Renal Dialysis, as a clinical resource coordinator and discharge planning nurse, and then as a clinical associate in Clinical Computing. In 2000, he took on the role of Nursing Practice Associate in the Office of Professional Nursing, taking on the responsibility for ensuring the quality of nursing care related to patients’ wounds.

Approximately four years ago, Nolette underwent specialty education and training for national certification, becoming one of only two staff nurse wound specialists at DHMC. He now works to meet the wound care needs of medically complex patients in both the ambulatory clinic and inpatient settings. In his current role, he provides clinical expertise, consultations, education and mentoring of staff. He collaborates with physicians and other clinicians to improve the care of patients with wounds or any other skin issues including the prevention of pressure ulcers. Peter is involved in the pressure ulcer prevention project, a multidisciplinary quality improvement project that began as part of the work with the “coaching the coaching” series, and serves as chair of the Skin and Wound Improvement Team (SWIT). Under his leadership, the SWIT reviews and evaluates products related to wound care and ulcer prevention.

Since 2002, DHMC has participated in the

National Database of Nursing Quality Indicators (NDNQI) for pressure ulcers, patient falls and nurse staffing. The database provides us with patient outcome data that is used to monitor and drive quality improvement. As the NDNQI Coordinator, Peter consistently demonstrates his commitment to ensuring that our systems for data collection are sound and the data reliable. He coordinates the conduct of the quarterly pressure ulcer prevalence study on the inpatient units and also provides ongoing education of the staff who collect data to help them stay current with the latest NDNQI training.

And, Nolette’s commitment to education can be seen in the many venues in which he chooses to offer his expertise as a wound care specialist. For example, he teaches as part of the Nurse Residence Program and the Experienced Nurse Orientation. He also provides education programs in the form of unit-based training, shadowing experiences, grand rounds and presentations at regional conferences.

According to his nomination letter, Nolette consistently provides patient care of exceptional quality, often exceeding expectations. His long career exemplifies a commitment to exceptional quality, either through his interactions with patients and their families, working with staff, participating in and leading quality improvement initiatives or by getting involved with the community.

A STEP AHEAD FOR BALANCE

CAN WE TEACH older adults to avoid falling when they slip or trip? The goal of a collaborative effort involving rehabilitation and research is to see if innovative technology for balance training can reduce falls by a greater percentage than standard treatment alone.

The ActiveStep system—a new offering within the Balance and Vestibular Program in Rehabilitation Medicine at DHMC—gives patients and physical therapists the opportunity to test and retrain the recovery response to slip/trip and common balance challenges.

“We are excited to have this new technology to help patients reduce their risk of falling. This could be a way to improve balance,” said Dawna Pidgeon, PT, Rehabilitation Medicine.

Falls are the leading cause of fatal and non-fatal injuries in the elderly. One in three Americans over the age of 65 will fall each year. While the balance program has been in place at DHMC since the early 1990s, Pidgeon explained that up until now, the rehab techniques focused on risk factors such as strength, flexibility, change in gait and dizziness shown to reduce falls by 30%.

ActiveStep tests a patient’s recovery response, a natural movement that can keep a slip or trip from becoming a fall. The treadmill simulates life-like balance challenges—misplaced step, trip on uneven ground, slip on a wet spot, getting bumped—while keeping the patient safe using a harness. ActiveStep measures the recovery response—dynamic stability, step recovery, and trunk control movements.

Through repetition of the balance challenges, the patient retrains his or her recovery response. In as little as one 30-minute session, patients can measurably modify their recovery biomechanics, which can reduce their risk of falling. The length of the training depends on the patient but most last eight to twelve weeks and like other balance treatments is covered under insurance and Medicare reimbursement.

While many older adults may not be familiar with the use of a treadmill, the intensity of the program is controlled and slowly increased so patients—even the most frail—will not feel threatened or uncomfortable.

Once patients get used to the machine, they seem to enjoy the



Dawna Pidgeon, a Physical Therapist with DHMC's Rehabilitation Medicine program works with patient Fredrick Appleton on the ActiveStep treadmill.

training, explained Pidgeon. Because there is feedback, patients can see their progress and report incidents where they believe they would have fallen if they hadn't had the training as part of their treatment.

ActiveStep has been developed by Simbex, an engineering firm located in Lebanon, based on research by Mark Grabiner, PhD, of the University of Illinois at Chicago. The approach was to simulate realistic trips under controlled laboratory conditions to help older adults build confidence in balance and mobility. After researching the concept in the lab and based on anecdotal evidence of fewer falls after treatment in the clinical setting, the next step is to understand the effectiveness of the system to reduce falls in the community.

A pilot study with principal investigator Jonathan Lurie, MD, Spine Center, in collaboration with Alice Peck Day Hospital (APD) and the Veterans' Administration (VA) will determine if ActiveStep can reduce falls by a greater percentage than standard treatment alone. If the pilot study is successful, this may lead to a national clinical trial study funded by the CDC or National Institute on Aging.

“To take this to the next level for evidence based research, we have the good fortune to partner with clinicians and research colleagues locally at DHMC, APD and the VA,” said Rick Greenwald, President, Simbex. “The collaborative work to do the important research in clinical efficacy is good for everyone.”

CAMPAIGN UPDATE

THE TRANSFORMING MEDICINE CAMPAIGN continues to make progress towards its \$250 million goal, with gift commitments now surpassing \$228 million.

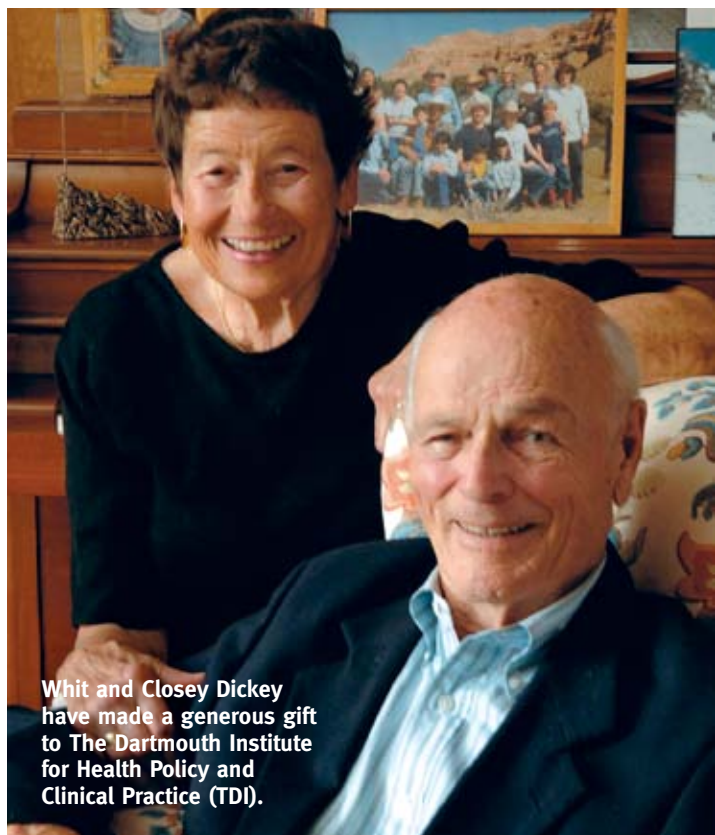
The current economic uncertainty has prompted an increasing number of donors to look to deferred giving as a way to sustain their commitment to charitable giving. Strategies such as providing for Dartmouth-Hitchcock Medical Center (DHMC) through a bequest in your will or as the beneficiary of a life insurance policy or retirement account are simple to do and may reduce estate taxes. Other forms of deferred gifts, such as Charitable Lead Trusts or gifts funded with real estate, may also offer immediate financial benefits to the donor.

The Campaign.
transformingmedicine
Dartmouth Medical School
Dartmouth-Hitchcock Medical Center

Deferred gifts have been an important contributor to the success of the Transforming Medicine Campaign. For example just one type of deferred gift—the simple bequest—has resulted in almost \$20 million in gifts from more than 80 donors. Through these gifts, donors are leaving a legacy of strengthening patient care, advancing research and teaching, building endowments, and providing critical support for the facilities and programs that will keep DHMC at the forefront of academic medicine.

While a bequest may be designated for a particular purpose, many donors choose not to restrict their bequest. By naming the hospital, cancer center, or medical school as their beneficiary, they allow their gift to be put to use where it's needed most, depending on circumstances at the time the gift is received.

For more information about deferred giving opportunities, visit DHMC's gift planning website: www.DHMC.org/dept/dev/pg, or contact Vicki Peiffer in the Office of Gift Planning at 603-653-0733.



Whit and Closey Dickey have made a generous gift to The Dartmouth Institute for Health Policy and Clinical Practice (TDI).

PHOTO COURTESY WHIT & CLOSEY DICKEY

Pride in Community, Pride in Medicine

bined two things that we greatly admire, so we decided that would be a good place to make our gift.”

Through their many different relationships with DHMC, DMS, and Alice Peck Day Hospital (APD) in Lebanon, the Dickeyes have had a close-up view of the medical center's growth and evolution, gaining greater insight than many lay people into the issues in medicine and health care today.

For more than 10 years, the Dickeyes shared their home with Dartmouth Medical School (DMS) students, forming lasting bonds and cementing their positive impressions of DMS. “They were a wonderful bunch,” says Whit. “We learned a lot about the medical school from them. Seeing the medical school through their eyes, we couldn't help but get a good feeling about it.”

Another inside perspective came from Closey's 10 years serving as the lay representative on Dartmouth's Committee for the Protection of Human Subjects, which oversees research projects involving human participants throughout the medical center and the college. “We would have cases that we had to study the week before our meeting, and I would stay up until three in the morning,” she recalls. “But I loved the insight I got through that committee.”

In addition, the Dickeyes have been members of the Dartmouth-Hitchcock Assembly of Overseers and the former DMS Dean's Council. They are also long-time supporters and champions of APD. Closey has been an APD Trustee (now Emerita) for 27 years and together she and Whit chaired the hospital's recent \$4 million capital campaign. “They're totally different hospitals, and we're fortunate to have them both,” says Closey of APD and DHMC.

The Dickeyes' gift to The Dartmouth Institute endows a post-graduate fellowship in evaluative clinical science, a field that TDI has pioneered. The fellowship is named in memory of Closey's father, orthopedic surgeon Donald MacKenzie Faulkner, MD, with a preference that it be awarded to an orthopaedic surgery resident. It is a gift that exemplifies their commitment to quality health care and the training of future generations of medical professionals.

INTRODUCING: The Newly Formed DHMC Department of Neurology

“BEING A DEPARTMENT elevates the importance of the nervous system in health care,” says Greg Holmes, MD, Chair of the newly created Department of Neurology at Dartmouth-Hitchcock Medical Center (DHMC). “Neurological disorders increase as the population ages, so the research and training we’ll be able to do now is more important than ever.”

Holmes likens the current state of neurology to cardiology ten years ago. “We can now treat acute strokes as aggressively as we treat MIs [heart attacks]” Holmes says. “We’re developing new surgical management of epilepsy, we’re researching new treatments for movement disorders, we’re discovering sophisticated medicines specific to neurological diseases. Having department status allows us to expand our training program and engage in more research.”

Jeff Cohen, MD, assistant chair of the new department, concurs. “Our national stature as a center for the neurosciences has gone up considerably. Being a department puts us in a better, more competitive position for research grants, for multi-center drug trials, and for recruitment.”

Indeed, the Neurology Department has already added two new fellowship positions in Clinical Neurophysiology and is planning a future stroke fellowship. Additionally, DMS students will be able to start neurology clerkships in their third year of medical school instead of waiting for their fourth year, deepening their education in this growing field. By elevating Neurology from a section within the Department of Medicine to a Department in its own right, Dartmouth joins other top-tier medical centers, giving Dartmouth a competitive edge for attracting medical students, fellows and researchers. Holmes expects this elevation of neuroscience at Dartmouth will



“Patients benefit from the sophistication that comes with subspecialty care, including better expertise and better technology.”

Greg Holmes, MD
Chair, DHMC Department of Neurology

with the final result. “Granting agencies look more favorably on programs that have the institutional support that comes with being a department,” explains James Bernat, MD, a neurologist at Dartmouth since 1974. “It gives us a seat at the table for important decisions effecting DHMC and DMS.” Bernat adds, “Just as Radiology, Anesthesiology and Orthopedics became separate departments when they achieved a critical size, Neurology is just the newest. It should have happened years ago.”

Elijah Stommel, MD, who specializes in both research and treatment of Amyotrophic Lateral Sclerosis (ALS), agrees. “On a national level, we’re following the norm. Being a department gives us a little more clout and will help us to make our dreams come true.”

Better positioned to compete for research grants, to attract top-notch trainees, and to build a well-founded reputation in providing the best possible care for neurological diseases will, of course, benefit patients at DHMC most of all. The Department is already talking with colleagues around the state to create a stroke network that will ensure proper and swift treatments that minimize what can otherwise be devastating brain damage. Other plans include boosting programs that study and treat epilepsy, Parkinson’s disease, Alzheimer’s disease, multiple sclerosis and ALS, as well as headaches and cancers of the brain. “Patients benefit from the sophistication that comes with subspecialty care, including better expertise and better technology,” says Holmes. “As a department, we are in a better position to understand and treat the disorders of the nervous system.”

ultimately attract scientists eager to do translational research. In fact, it was the promise and challenge of bringing this organizational change that attracted Holmes to Dartmouth six years ago.

Holmes initially accepted this leadership role at Dartmouth so he could work at Dartmouth’s highly academic, research- and teaching-oriented institution whose relatively small size allows for an appealing collegiality that encourages consultation between scientists and physicians. “It’s a two-way street,” Holmes explains. “Research doesn’t only travel from bench to bedside,” he says. “At Dartmouth, physicians invite researchers into the clinic to see exactly what’s happening on the clinical side of the equation—with the patients—improving translational research. As a department, we have enhanced appeal to trainees, which will improve our applicant pool and allow us to expand our residency program from six to nine residents.”

While Holmes admits the process took longer than he expected, he and his colleagues are pleased

THE MISSION of The Dartmouth Institute for Health Policy & Clinical Practice (TDI), is to measure and improve health care. Toward that end, they seek to develop “a learning community of clinicians and scholars,” says Brant Oliver, NP, MSN, MPH, Director of TDI’s Nursing Journal Club, one of the learning communities they’ve established. The Journal Club meets monthly on Wednesday evenings at DHMC. Participants critically review research, learn research skills, and apply this to evidence-based practice with the guidance and insight of researchers from TDI, DHMC, and other institutions. Each session has both a topic and a research method focus.

The TDI Journal Club was started last year by Marie Claire Rosenberg, PhD, RN, MPA, now at the New York University School of Nursing, then a TDI doctoral student, for TDI students and DHMC staff. They had about thirty participants. “Part of our goal this year,” Oliver says, “has been to make connections with nursing and other allied health disciplines at DHMC to better collaborate with them.” DHMC’s shared governance, research and education committees have helped Oliver identify learning needs and opportunities for collaboration. Raeann Hodgson, RN, from the Office of Professional Nursing, has helped Oliver manage the Journal Club and target topics and activities of interest to nurses; Deb Hastings, PhD, RN, and Judy Langhans in the Office of Continuing Education, have helped Oliver set up a process to award ANCC contact hours for Journal Club participation; and Brigid Guarino, in TDI’s Office of Education, has been providing administra-

TDI Nursing Journal Club: Continuing Nursing Education and Expanding Knowledge



Participants critically review research, learn research skills, and apply this to evidence-based practice with the guidance and insight of researchers from TDI, DHMC, and other institutions.

tive and logistical support.

The Journal Club now has over eighty registered participants. Participants may join at any time, as each session is independent. Oliver offers a leadership session before each journal club meeting, for “idea-generation and management-building.” Those who are off-site can “attend” via WebEx. Participants can access the slides on the Internet and call in on a conference line for audio. Every session is recorded, so those who have a time conflict can log onto the Blackboard website later to watch. Currently, you must attend a session in person to get credit, but eventually distance learners may be able to get credit as well.

“Next year will probably be multi-disciplinary,” Oliver says. “Open to anyone.” As they build momentum, they may branch off separate clubs; Social Work, for instance, has expressed interest in starting one. Ultimately Oliver hopes that the participants will take over administration of their own journal clubs.

Oliver has been working with Vin Fusca, MMS, of TDI’s Director’s Office, and Karen Tombs, EdD, in TDI’s Office of Educational Programs. “We’re working together to develop and strengthen the Journal Club, but also looking at it as a platform for bigger things to come, such as module-based programs from TDI, accessible to nurses and allied health professionals, possibly for academic credit.”

Oliver, in addition to being a PhD student at TDI, is the Director of the Multiple Sclerosis Evaluative Sciences Research Program and a Nurse Practitioner at the Multiple Sclerosis Center.

Head & Neck Cancer Awareness Day

Wednesday, April 29

Join us for our first Head & Neck Cancer Awareness Day at Norris Cotton Cancer Center-North in St. Johnsbury on Wednesday, April 29 from 4-8 p.m. Free mouth cancer screenings will be available. Visit educational displays and pick up materials on head and neck cancers and tobacco use; listen to short talks by physicians and a tobacco educator on these topics. This event is free and open to the public. For more information: cancer.dartmouth.edu or (800) 639-6918.

Melanoma Awareness Day

Thursday, May 21

Learn more about protecting yourself from skin cancer at our inaugural Melanoma Awareness Day at DHMC on Thursday, May 21 from 4-7:30 p.m. Visit educational displays and pick up materials on sun safety, tanning, and more in the South Mall. Attend short talks in Auditorium E by a Dermatology nurse and physicians. This event is co-sponsored by Norris Cotton Cancer Center and is free and open to the public. Refreshments will be served. For more information: cancer.dartmouth.edu or (800) 639-6918.

Cancer Survivors Day 2009

Sunday, May 31

Norris Cotton Cancer Center's Cancer Survivors Day 2009 will be held on Sunday, May 31 from 1-3:30 p.m. at the AVA Gallery and Art Center at 11 Bank Street in Lebanon. Celebrate and connect with fellow survivors, families, and Cancer Center staff. Enjoy art, live music, and refreshments in this bright and airy setting. AVA is one block from the Green in downtown Lebanon, with free on-site parking. For more information about this free event: cancer.dartmouth.edu or (800) 639-6918.

My Health, My Choice: Getting the Care You Want and Need in Later Life

Tuesday, June 9

The Dartmouth-Hitchcock Healthy Aging Center will be hosting the next in their series of public lectures on June 9 from 5-6:30 p.m. in Auditorium E at DHMC. Dr.

Take Note

Julie Bynum, an Assistant Professor of Medicine and Community and Family Medicine, will focus on how to get the health care you need, on your terms, as you age. For more information, visit dhmc.org/goto/Healthy-Aging or call (603) 653-0868.

25th Anniversary CHaD Classic Golf Tournament

Monday, June 15

The tournament, held at the Quechee Club in Quechee, VT, features Best Ball of Foursome, Gross & Net. Registration opens at 9 a.m. with National Champion Long drive hitters exhibition at 9:45 and a shotgun start at 11 a.m. The day wraps up with dinner, awards and a live auction. Play is limited to the first 240 players who register. Registration information contact: Gail at jngferney@aol.com

4th Annual Inflammatory Bowel Disease Symposium

Saturday, June 20

A full day educational program for adults and children who suffer with Crohn's disease and ulcerative colitis, as well as their families. Co-hosted by the Inflammatory Bowel Disease Center at DHMC and the Crohn's & Colitis Foundation of America (CCFA). In DHMC's Auditoria A-G. Registration: \$10 for CCFA members/\$15 for non-members. 18 and under, free. For program details or to register, visit ccfa.org/chapters/ne or call (800) 314-3459, ext. 21.

Skip's Run 2009

Sunday, June 21

On Father's Day, the 6th annual Skip's Run and barbecue will take place on the green in Lebanon. This event honors Skip Matthews who passed away after a two-year fight with brain cancer. The race celebrates his life and provides money for continued brain tumor research. You can choose to do a one mile walk or run or a four mile run. A fun, family-centered event and a

perfect way to celebrate Father's Day. Entertainment and refreshments will be provided. To learn more/register, visit <http://www.skipsrun.org>.

Eastman Golf Tournament: A Very Sweet Dessert Auction and Golf Tournament

Thursday-Friday, June 25 and 26

All proceeds benefit the Norris Cotton Cancer Center. Join the Eastman community in Grantham on Thursday evening June 25 from 6:30 - 9 p.m. for thier a fabulous dessert buffet, cocktails and silent auction (\$15/pp) and at their 18 hole-shotgun amateur golf tournament on Friday, June 26 (\$125/pp). Tournament tickets include greens fee, golf cart, lunch, after-golf party, and a player's gift bag. Visit: www.eastmannh.org/nc or call Polly Richard (603) 865-5281 or Claire Vogel (603) 863-5776 for more information or to register.

The Prouty Ultimate: Join the Ultimate Fight Against Cancer

Friday-Saturday, July 10 & 11

For serious cyclists and committed fundraisers, The new Prouty Ultimate Back-to-back Century Ride challenges participants to ride 200 miles in 2 days. Day One: a scenic, demanding 100 mile route from Manchester to Hanover. Day Two: cyclists join the Prouty Century Ride through the beautiful Upper Connecticut River Valley. Minimum is \$1750 each if you ride with a friend. \$2,500 per individual. All monies raised benefit Dartmouth-Hitchcock's Norris Cotton Cancer Center. Register at www.theproutyultimate.org.

Prouty Century Bike Ride & Challenge Walk

Saturday, July 11

Join more than 4,000 participants and volunteers for the 28th Annual Prouty Century Bike Ride & Challenge Walk in Hanover. Bikers and walkers, families, individuals and teams all come together on this amazing, fun-filled day to support cancer research and patient services at Norris Cotton Cancer Center. Register online at www.theprouty.org or contact Catherine Rentz, (800) 226-8744, catherine.g.rentz@dartmouth.edu for more information. Please note: Bikers must register by July 8. Let's Prouty!

Who, What, When & Where

Jim Yong Kim, MD, PhD, Chair of the Department of Global Health and Social Medicine at Harvard Medical School, has been elected the 17th President of Dartmouth by the College's Board of Trustees. Ed Haldeman, Chair of Dartmouth's Board of Trustees, announced the appointment Monday, March 2, at a meeting of students, faculty and staff. Dr. Kim, 49, will take office on July 1, 2009 and succeeds James Wright, who previously announced that he is stepping down in June after 11 years as President of the College.

Julianna Czum, MD, Director of Cardiac Imaging in the Department of Radiology at Dartmouth-Hitchcock Medical Center (DHMC) and Assistant Professor of Radiology and Medicine (Section of Cardiology) at Dartmouth Medical School, recently became certified in cardiovascular computed tomography (CCT), making her one of only four physicians in all of Northern New England to hold that distinction. Computed tomography, or CT, combines radiographic (x-ray) equipment with sophisticated computers to produce hundreds of cross-sectional images of the body in only a few seconds. While CT technology has been around since the 1970s, recent technological advances permit high-resolution, "stop-action" imaging of the beating heart.

Dartmouth Medical School pain scientist **Dr. Joyce DeLeo** has won the American Pain Society's 2009 Frederick W. L.

Kerr Basic Science Research Award. The research award was established in 1987 to honor Frederick W. L. Kerr, a founder of the American Pain Society. It is presented annually for individual excellence and achievement in pain scholarship.

Dartmouth-Hitchcock Medical Center (DHMC) has been re-verified as an **Adult Level I Trauma Center** and verified as a **Pediatric Level I Trauma Center**. Level I is the highest designation given by the American College of Surgeons (ACS) Committee on Trauma (COT), which conducts the rigorous review process every three years. It is a voluntary program that recognizes a trauma center's dedication to providing optimal care for injured patients. DHMC is one of only three medical centers in northern New England with the Adult Level I designation, and is the only health care facility in all of northern New England with the Pediatric Level I designation.

National Cancer Institute Renews Norris Cotton Cancer Center's National Designation. Dartmouth-Hitchcock's Norris Cotton Cancer Center was recently notified by the National Cancer Institute (NCI) that it was approved for an additional five years as an NCI-designated cancer center, a prestigious distinction that the Cancer Center has held continuously since 1978. Norris Cotton Cancer Center is the only cancer center in northern New England, and

one of only 40 centers nationwide, to hold the comprehensive cancer center designation from the NCI.

Congratulations to **CHaD/Dartmouth-Hitchcock Pediatric Diabetes Education Program** for successfully completing an audit. During the process of the audit, this program demonstrated excellent pediatric care standards and successful implementation of goal-setting and evaluation of goals for effective behavior change, typically more successful in adult programs in a pediatric setting. Kudos to coordinator Laurie Campbell, RD, LD, CSP, CDE and staff who demonstrated a commitment to offering a comprehensive and effective diabetes education program to their pediatric clients. There are very few pediatric programs that achieve this recognition from the ADA.

The **Department of Neurology** at DHMC recently had multiple books published. Dr. Morris Levin was co-author of *Headache and Facial Pain*, published in November 2008 by Oxford University Press. He also published *Comprehensive Review of Headache Medicine* in April 2008, which was reviewed by *The New England Journal of Medicine* as "easy to read and covers all the main topics in headache medicine." Dr. James Bernat had a 3rd edition of *Ethical Issues in Neurology*, noted as "...an excellent text for all clinicians interested in ethical decision-making."

DHMC MISSION:

We advance health through research, education, clinical practice and community partnerships, providing each person the best care, in the right place, at the right time, every time.

ABOUT DHMC:

Dartmouth-Hitchcock Medical Center includes *Mary Hitchcock Memorial Hospital*, a member of the *New England Alliance for Health*; *Dartmouth Medical School*, the state's only medical school; *Dartmouth-Hitchcock Clinic*, a multi-specialty academic group practice; and *Veterans Affairs Medical Center in Vermont*, which provides a rich educational environment for doctors in training.

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