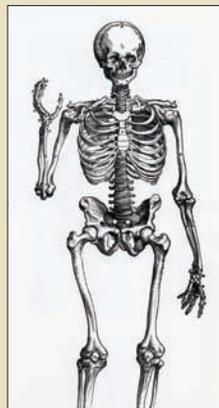


FACTS & FIGURES

Joint resolution



ANDREAS VESALIUS

1960s

When the first successful joint replacement operations were done

300,000 / 193,000

Number of knee / hip replacements now done each year in the U.S.

700 / 350

Number of knee / hip replacements now done each year at DHMC

\$39,050 / \$41,400

Average total charge (for hospital and professional fees)

for a knee / hip replacement at DHMC

1970s

When Dartmouth began to collect failed, "explanted" artificial joints from all over the world to study the reasons for their failure

> 8,000

Number of explanted joints amassed at Dartmouth since then; it is now the world's largest such collection

1970s

When Dartmouth's Dr. Michael Mayor, an orthopaedic surgeon, and John Collier, a biomedical engineer, began to develop a porous-coated hip implant, the first cementless artificial joint

> 90%

National success rate of joint replacement operations today

SOURCES: DHMC, THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, AND THE NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

Undergraduates look at medicine through the lens of history

The history of the U.S. health-care system "has less to do with the history of medicine and more to do with the history of America," says Allen Koop, a visiting history professor at Dartmouth. For the past several years, he has taught a popular undergraduate course that focuses on the social, political, and economic influences on health care from colonial times to today.

Koop—the son of Dr. C. Everett Koop, a DMS professor and former U.S. surgeon general—hopes students will gain an understanding of "the way we've dealt with things like insurance and access to health care throughout all of American history." Both Koops are themselves products of a Dartmouth undergraduate education—in the Classes of 1937 and 1965. (See page 10 for more on the senior Koop.)

Benefits: Few people realize, for example, that employers began providing health insurance after World War II, Allen Koop says, when the government barred businesses from raising salaries. So to compete for a limited labor supply, employers began offering such benefits as pensions and health insurance. Health insurance has been tied to the U.S. workplace ever since.

Students carry what they learn far beyond the classroom. Adam Wilk, DC '06, now works for a health-care consulting firm. "No matter what policy options we come up with, I'm always re-

minded of Professor Koop's lessons," Wilk says. "As he lectured about efforts to effect universal health care in the U.S., he emphasized the near impossibility of easing the financial straits of one section of the health-care system—insurers, providers, patients—without squeezing another. No wonder our country has had such trouble passing any material reform!"

Many issues the course touches on are "not usually addressed until residency or beyond," adds Jeff DellaVolpe, a DC '04 who's now a medical student at Tulane. "I feel like I have had a huge leg up on the subject."

The course gives students a leg up on being a patient, too. "Everybody sooner or later ends up as a patient," Allen Koop says. He invites guest speakers to talk about their experiences with the health-care system. One guest showed the class a thick stack of paperwork generated during a battle with his insurance company. Esther Freeman, a DC '01 who's now a medical student at Harvard, never forgot him. "I always try to ask about insurance" she says, "and think about how that may be affecting a patient's ability to get good medical care."

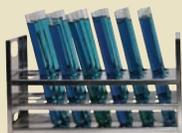
Context: "The class was really helpful in providing context for the current health-care crises," says Justin Altschuler, DC '06, now a medical student at UC-Berkeley/UC-San Francisco. He realizes that today's problems "are really an outgrowth . . . of problems that have been present for decades . . . or centuries."

DANIELLE THOMAS

THEN & NOW

A reminder of the pace of change, and of timeless truths, from a history of Dartmouth's Norris Cotton Cancer Center published circa 1987:

"The first official suggestion that the federal government might have an appropriate role to play in the effort to find a cure for cancer came from Matthew Neely, a Democratic Senator from West Virginia. As early as 1928, he introduced a bill in the Senate authorizing the National Academy of Science to investigate cancer." In the 1960s, Dr. Frank Lane, director of radiation therapy at Dartmouth, "perceived and articulated the need for a regional cancer center . . . that could serve all of rural northern New England." The National Cancer Act was finally passed in 1971.



20,000

Number of patients now cared for each year at Norris Cotton Cancer Center

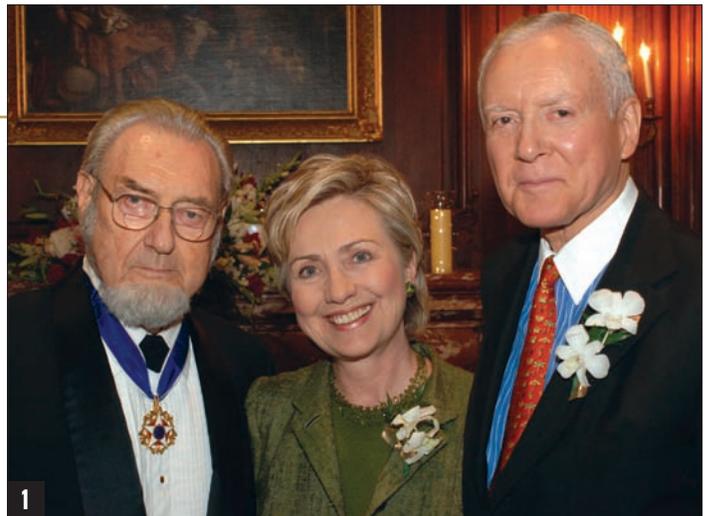
Nation's capital fetes Dartmouth's Dr. Koop on his 90th birthday

Party planners in the nation's capital couldn't wait for former U.S. Surgeon General Dr. C. Everett Koop to actually turn 90 before throwing him a big party. On September 13, 2006—a month before Dr. Koop's birthday—a gala celebration was held at the historic Cosmos Club in Washington, D.C.

Prominent: More than 200 people attended. Senators Hillary Rodham Clinton and Orrin Hatch were the event's cochairs. Other prominent politicians and physicians paid him tribute. Three of his successors as U.S. surgeon general were there, and many of his former pediatric surgery trainees traveled to Washington for the event. And Koop himself gave a speech about the next great task for our century—obtaining health care for all Americans.

Then back home in the Upper Valley, on November 2, he was the guest of honor at yet another birthday celebration. This one was at DHMC. And this time the celebration commemorated not only the birthday milestone, but also the fact that a new DHMC research complex is to be named after him (see article on the facing page).

Career: Born in Brooklyn, N.Y., on October 14, 1916, Koop graduated from Dartmouth College in 1937. He spent much of his career as a pediatric surgeon and established the first neonatal unit in the U.S. at the Children's



1



2



3



4



5



6

ALL: JON GILBERT FOX



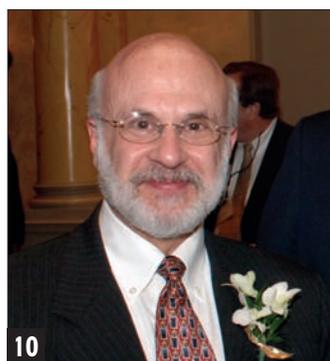
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8



9



10

Scenes from Dr. Koop's 90th birthday party: **1** the guest of honor and the event's cochair, Senators Hillary Rodham Clinton and Orrin Hatch; **2** four former surgeons general—Drs. David Satcher, Antonia Novello, Koop, and Richard Carmona; **3** Dr. Risa Lavizzo-Mourey, CEO of the Robert Wood Johnson Foundation, with Koop; **4** Dr. Judah Folkman of Harvard and Dr. Anthony Fauci of the NIH; **5** Dr. Roy Schwarz, former vice president of the AMA (and a current DMS Overseer), with Koop; **6** Dr. John Seffrin, CEO of the American Cancer Society, with Koop; **7** the cake, adorned with a bow tie of Koop's own design; **8** the event cochair making remarks about the guest of honor; **9** another speech, this one by Dr. Timothy Johnson, medical editor for ABC News; and **10** DMS's dean, Dr. Stephen Spielberg.

Hospital of Philadelphia. He served as U.S. surgeon general from 1981 to 1989. In addition to being the government's chief spokesperson on AIDS in the tumultuous years after the disease's identification, he advised the public on a variety of other matters: smoking's effect on health; diet and nutrition; environmental health hazards; and the importance of immunization and disease prevention.

In 1992, he established the C. Everett Koop Institute at Dartmouth, where he is still active as the Institute's senior scholar and a relentless advocate for public health and health education. He is also the Elizabeth DeCamp McNerny Professor of Surgery at Dartmouth Medical School.

Golden: "I frequently muse upon the fact that I've had a very wonderful life," Koop told DARTMOUTH MEDICINE recently. "I think I was practicing pediatric surgery right in the middle of the golden era of surgery. And I think that the eight years that I spent as Surgeon General was right on the cusp of the best years in public health. So I've seen the best. I've been part of the best. And that brings a sense of gratification."

When asked what he might have done if he hadn't been a physician, he chuckles. "It's funny—if I hadn't been a physician, I probably would have . . . run a bookstore," he says. "I would have always been associated with finding eager young minds who wanted to learn more, because that is the biggest kick I get out of what I do."

Laura Stephenson Carter

New DHMC complex is to be named in honor of Dr. Koop

Dr. C. Everett Koop, a Dartmouth alumnus and former U.S. surgeon general, took on big tobacco and talked openly about AIDS when few others would. His name was in the headlines then, and it will soon be emblazoned at DHMC—on a new research complex. "I take great pride in the fact that the four institutions concerned"—the Medical School, Hospital, Clinic, and College—were unanimous in the naming decision, said Koop at a celebration in his honor at DHMC.

The \$140-million Koop Medical Science Complex will provide a new home for DMS's Center for the Evaluative Clinical Sciences and flexible lab space for translational research. Linking its two wings will be a gathering space to be called LeBaron Commons. For more on the complex, see http://dartmed.dartmouth.edu/fall06/html/vs_building.php.

JENNIFER DURGIN



This architect's rendering shows the two wings of DHMC's Koop Complex-to-be.

For student, pathology project soothes loss

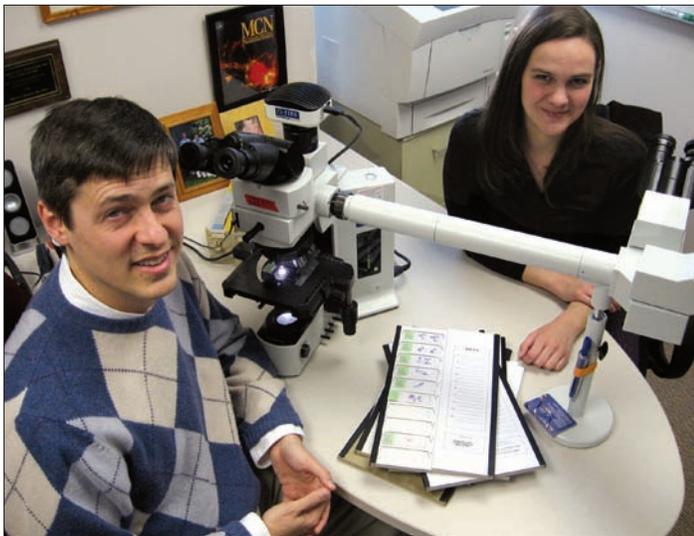
When Alissa Waite's father bumped his head on a ski lift in March 2005, he was diagnosed with a minor concussion. But about a week later, he passed out while skiing. A CT scan at the hospital revealed that his intracranial pressure was dangerously high. Rushed into surgery to relieve the pressure, he soon learned what was causing his symptoms—three brain tumors called glioblastomas. Patients with glioblastoma multiforme (GBM) usually live between 12 and 15 months. Waite's father died in February 2006, less than a year after his diagnosis.

Today, Waite, a second-year Dartmouth medical student, is able to talk comfortably about her father's death and the cancer that killed him, in part because of a research project she's been working on with Dr. Brent Harris, a DHMC neuropathologist.

The project, supported by the Andy Fund, involves looking at the correlation between various characteristics of GBM cells and a patient's prognosis. Harris and his collaborators—Drs. Camilo Fadul, a neuro-oncologist, and Gregory Tsongalis, a molecular pathologist—are interested in an enzyme that makes some chemotherapy drugs less effective.

Benefit: Throughout her father's illness, Waite says, she often felt "helpless." So when the opportunity arose to conduct research that might benefit future GBM patients, "I needed to jump on that," she says.

Waite spent last summer reviewing clinical histories and tracking down more than 100 tumor samples from GBM patients who had been treated at DHMC in the past five years. The samples will be used to create a tissue microarray—a small wax block



Alissa Waite's father died of a brain tumor in February 2006. Since then, with neuropathologist Brent Harris, she's been studying the kind of tumor her father had.



In this mid-1970s aerial view of the DMS campus, Strassenburgh Hall—originally built as a dormitory—is the low building on the far right.

Doggone it: Downside to building's demise

Its hallways are less than 36 inches wide, its lighting is dreary, and its carpets are dingy. Strassenburgh Hall—built as a medical-student dormitory in 1962 and for many decades now an office building—is one of three structures on the DMS campus scheduled for demolition or removal in a few months. (Butler, just west of Strassenburgh, and the modular building often called the "Pizza Hut," on the DMS lawn, are the other two.) In their place will eventually be a new Dartmouth College life sciences building.

One might expect the faculty and staff who have had offices in Strassenburgh to be thrilled at the prospect of moving to newer, more spacious, modern offices. But for some, leaving the quirky space will be bittersweet.

"I, for one, will be sad to leave Strassenburgh," says Denise Smith, a budget assistant who's been working in the building for five years. The narrow hallways, she explains, "make people talk to each other face to face, even if it's [just] 'Hi.'" Most of all, she'll miss bringing her 130-pound Saint Bernard to work. And Hemi, as he's named (after the Daimler-Chrysler engine), will no doubt miss playing with the half-dozen or so other dogs who regularly join their owners at work in dog-friendly Strassenburgh. Among them are a yellow lab, a black lab, a Brittany spaniel, a cockapoo, and a Bernese mountain dog.

"The new office space is much nicer," says Marion "Mimi" Simpson, a DMS instructor who also works in Strassenburgh, "but there are always tradeoffs." And the biggest tradeoff for many, as Strassenburgh bites the dust, may be the fact that they'll need to leave their furry companions at home. J.D.



HOT STUFF: When the President's Cancer Panel visited Kentucky, DMS's Dr. James Sargent was invited to present his research on movie smoking's effects on children. A local paper called it "one of the most interesting presentations."

that can hold several hundred tiny tissue cores. The microarray can then be cut into slides, each of which will contain hundreds of different tumor samples.

Microarrays "are an efficient and cost-effective method" for analyzing a lot of tissue samples simultaneously, Harris explains.

"We'll use a few of those slides—a few slices off the top of the block," Waite says, "then the block will be here as a resource" for other scientists who wish to collaborate with Harris's group or to conduct their own analyses.

Harris's GBM project is having another, rather unexpected benefit—not for other scientists but for Waite. Working on the GBM research has been "very therapeutic for me," says Waite, "to feel like I'm doing something to maybe make [things] different for the next family" facing a GBM diagnosis. "Plus it's been great to get to know the faculty at the hospital a little bit better," she adds, "and to see how the hospital works." Harris invited Waite to shadow him so she could get a sense of what a neuropathologist does, and he's helping her stay involved with the research project, even as she manages a full class load.

Lab: Dartmouth has "a lot of mechanisms" that allow medical students to do research, says Harris. As an M.D.-Ph.D., he sees great value in medical students spending time in the lab.

Waite does not plan to pursue an M.D.-Ph.D., but she hopes to always keep a foot in research. "Medicine gives you an opportunity to [do] that," she says.

JENNIFER DURGIN

Playing around with proteomics

There's a new kid on the block over at Dartmouth's Norris Cotton Cancer Center, and he's willing to share his high-tech "toys." Dr. Scott Gerber, a proteomics expert who until recently was at Harvard, has a couple of state-of-the-art mass spectrometers that analyze proteins faster than a speeding bullet. And he's happy to let other Dartmouth scientists use them, too.

Cells: Proteomics, the newest frontier in cancer research, is the study of proteins and their function. Genes are the blueprints for cells, but proteins are their workhorses, says Gerber. To understand how cells work, one needs to understand what proteins are present and how they interact with each other.

"We are interested in the large-scale analysis of proteins [to determine] how they function in a network in a connected sort of environment to affect the cellular process, whether that's gene and mismatch repair or driving a cell forward and telling a cell, 'Okay it's time to divide and to generate progeny,' and so forth," he explains.

The mass spectrometers, each about the size of a washing machine, can do high-speed analysis of complex proteins—"potentially tens of thousands of peptides in a single sample," Gerber says. The equipment has enough capacity to handle Gerber's own work as well as questions from other DMS investigators.

One of the machines belongs to the Molecular Biology and Proteomics Core Facility, which

offers services to DMS faculty who have isolated a protein but don't know what it is. "They can submit that sample to the core . . . and essentially have the protein identified," says Gerber, who is the associate director of the core facility.

Gerber's own research focuses on determining how certain proteins, when they are disrupted, drive a cell to become cancerous, as well as on developing technologies to profile human fluid samples, like plasma and serum, for biomarkers that might be early indicators of disease.

"Ultimately, our goal is to identify biomarkers, but we're approaching that problem more from a technological perspective," he says. The human proteome is so complex that "trying to find a molecule that's representative of your idiosyncratic state of health at this snapshot in time is a very, very challenging task. So we develop technology

to assist in the process." Gerber collaborates with cell biologists, immunologists, pharmacologists, bioengineers, and clinicians to help unlock cancer's secrets.

Small: It might seem surprising that Gerber is so comfortable in such a high-tech field considering he grew up in a town in Idaho so small that there were only six people in his high school class. "It was a pretty small environment, and I couldn't wait to leave it," he confesses. He majored in chemistry at Willamette University in Salem, Ore., got his Ph.D. in analytical chemistry at the University of Washington, and was a postdoctoral fellow at Harvard before coming to Dartmouth in 2006 as an assistant professor of genetics.

Now he's got the best of both worlds—big and small: DMS is big enough to offer high-tech, world-class research opportunities and small enough for the kind of collegial, collaborative relationships Gerber enjoys.

Laura Stephenson Carter



LAUREN WOOD

Proteomics expert Scott Gerber is happy to show off—and even share—his "toys," like this mass spectrometer, which can do high-speed analysis of complex proteins.

Pharmacogenomics: One size doesn't fit all

Some people get buzzed from a half-cup of coffee, while others need three cups before 10:00 a.m. It should be a no-brainer then that the same concept is true for medications. Yet drugs are often prescribed using a one-dosage-fits-all mentality.

The result? Undertreated, overtreated, and sometimes endangered patients. An emerging field called pharmacogenomics addresses this problem by considering how genetic variations affect a drug's efficacy and risks.

Therapy: Pharmacogenomics allows physicians to personalize drug therapy, explains Dr. Kiang-Teck "Jerry" Yeo, director of the DHMC Clinical Chemistry and Endocrinology Laboratory. About two years ago, Yeo teamed up with Drs. Lionel Lewis, a clinical pharmacologist, and Gregory Tsongalis, director of molecular pathology, to offer pharma-

cogenomic tests to DHMC clinicians and patients.

Fewer: Few academic medical centers have such testing in house. Even fewer—if any—have a group that also interprets the results—which can “sound like gobbledygook” to physicians, says Yeo—and offers recommendations. Doctors often “don't have the time” to learn about all the different normal genetic variants that relate to medications, Yeo explains.

Furthermore, when determining the best drug for a patient, physicians must also consider any other medications the patient is taking. That requires a lot of time and special expertise, which Yeo, Tsongalis, and Lewis are happy to provide.

One procedure they offer is the UGT1A1 test. (DHMC was the first in the country to offer this test. See http://dartmed.dartmouth.edu/winter05/html/vs_genetics.php for details on it.) UGT1A1 (UDP-glucuronosyl transferase 1A1) is an enzyme that breaks down the active metabolite of irinotecan (Camptosar)—a first-line drug for colon cancer. Individuals with a particular variation of the UGT1A1 gene process the irinotecan metabolite relatively slowly and need a lower dose. The standard dose would reduce their count of certain white blood cells, making them more susceptible to bacterial infections. About 7% to 10% of Caucasians are believed to have this variation, so the Food and Drug Administration now recommends UGT1A1 testing for anyone taking irinotecan.

The DHMC pharmacogenomics group may be a pioneer in the field, but Lewis considers such work to still be in an “embryonic” stage. So far, physicians have learned about the DHMC pharmacogenomics service by word of mouth.

Consults: Now, after performing several consults per month, the group is ready to expand and to begin charging for the tests—which most insurance plans will cover, they say. But they “don't want to launch something without educating folks,” insists Yeo. So the group recently organized a symposium to give physicians a chance to learn more about pharmacogenomics and the group's services.

It's too early to tell if the symposium will generate more consults, says Tsongalis, but “the requests to have the conference [again] are overwhelming.”

JENNIFER DURGIN

THEN & NOW

A reminder of the pace of change, and of timeless truths, from the 1976 MHMH annual report:

“With the addition of a second cardiac surgeon, Dr. Jose Mijangos, the increased surgical activities so essential to full development of the cardiology program have begun. . . . A special intensive cardiac surgery unit is being constructed in the Intensive Care Unit area. . . . The new centralized Cardiopulmonary Laboratory is now fully active and is a central element to the success of cardiac surgery activities.”



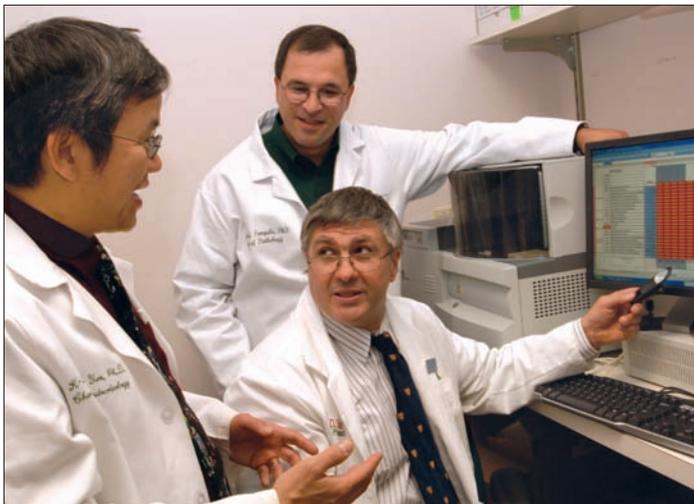
54

Number of beds today in DHMC's Coronary Care, Intermediate Coronary Care, and Cardiothoracic Intensive Care Units

> 5,000

Number of procedures annually in the Cardiac Catheterization Laboratories

JON GILBERT FOX



Jerry Yeo, foreground; Lionel Lewis, seated; and Greg Tsongalis have made DHMC one of the first medical centers—if not the first—to have a completely in-house pharmacogenomics group to help physicians personalize complex drug therapies.



ON THE MAP: For the first time ever, the United Health Foundation's national "healthiest states" ranking took account of data about the cost versus the quality of care —by drawing on the *Dartmouth Atlas of Health Care*.

THEN & NOW

A reminder of the pace of change, and of timeless truths, from DMS's 1902 "Circular of Information":

"Applicants for admission to [DMS] must have (a) graduated from a registered College, or (b) satisfactorily completed a full course in a registered Academy or High School, or (c) have had a preliminary education considered and accepted as fully equivalent. . . . All other candidates for admission . . . will be examined in the following subjects." Among the subjects listed were Shakespeare's *Merchant of Venice*; Pope's *Iliad*; Scott's *Ivanhoe*; Allen's *Short History of the Roman People*; chemical notation; quadratic equations; plane geometry; and "the ability to translate at sight easy Latin prose."



> 4,600

Number of applicants to the DMS Class of 2010

Fisher steps into the pay-for-performance ring

Pay for performance is a relatively new—but already controversial—trend in the health-care world. Proponents argue that it will save Medicare and the entire U.S. health-care system from financial collapse while improving quality; detractors argue that it will undermine the altruistic and professional core of medicine and further squeeze small-practice physicians.

A Dartmouth physician-researcher who has helped shape the national debate over health-care spending is now helping shape the pay-for-performance debate, too. "In a nutshell, pay for performance is about giving financial incentives to providers to improve the quality of care they give their patients," explained Dr. Elliott Fisher in a September interview with the *New England Journal of Medicine*.

Pitfalls: The trouble with pay for performance is not in the concept but in the implementation, which is fraught with potential pitfalls. Fisher and 22 other health-care experts from around the country examined those pitfalls—and suggested strategies to avoid them—in a recent Institute of Medicine (IOM) report. Titled "Rewarding Provider Performance: Aligning Incentives in Medicare," the report offers six recommendations for policy-makers. Among the recommendations is that any pay-for-performance plan take into account broad aspects of performance—clinical quality, patient-centered care, and efficiency—not just narrow mea-

asures, such as the percentage of a physician's patients who receive a certain screening test.

The report also recommends that physicians be rewarded, at least initially, for simply collecting and reporting data, since doing so will require an investment of time and resources on their part. Perhaps most importantly, the report emphasizes the need for pay for performance to be implemented in a "learning environment," as Fisher puts it.

Broken: "The payment system is fundamentally broken and is a barrier to achieving high-quality health care," says Fisher. "Pay for performance is a means to learn how to" improve that system and health care in general. But unless policy-makers carefully evaluate and learn from the early implementation of pay for performance, Fisher notes, "we might well produce more harm than good."

Fisher should know. He's been studying health-care delivery and outcomes for about 20 years. He and Dr. John Wennberg, both senior faculty at Dartmouth's Center for the Evaluative Clinical Sciences (CECS), were the first to show that geographic areas that spend more on health care often have worse outcomes. Both are also members of the IOM, established in 1970 by the National Academy of Sciences as the premier health advisory organization in the country. Fisher was elected to the Institute in October.

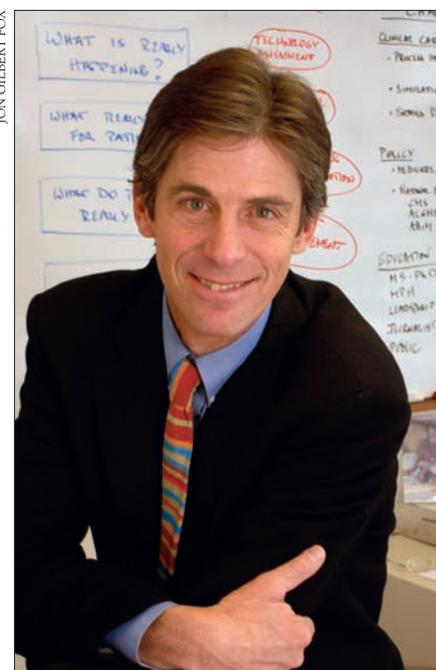
It's more than just a personal honor, Fisher says of joining the

IOM. It is also a "validation and recognition of the relevance and importance of the work we're doing at Dartmouth around the relationship between spending, clinical practice, and the outcomes of care," he says.

Fisher hopes the research at CECS will continue to inform the IOM's policy statements. As for the recent report he contributed to, such documents "can have a powerful influence," he says. Pay for performance is widely perceived to be "the current magic bullet," he points out, but "our committee raises serious questions" about its implementation. (For more on pay for performance and DHMC's role in a national trial of the concept, see http://dartmed.dartmouth.edu/spring05/html/disc_performance.php.)

JENNIFER DURGIN

JON GILBERT FOX



Elliott Fisher has been a national force in the pay-for-performance debate.

POWER UP: *New Hampshire* magazine put Frank McDougall, vice president of government relations at DHMC, on its 2006 "It List" of Granite State movers and shakers, saying he "knows the corridors of power" and is "always straddling party lines."



MAKE THAT THE DACGME

No, really, there's no move afoot at Dartmouth to co-opt the Accreditation Council for Graduate Medical Education (ACGME). It just seems that way.

The ACGME accredits 7,800 U.S. residency programs, which train 100,000 residents in 27 specialties. It's a huge national organization, but at its September 2006 meeting, held in Rosemont, Ill., there was a significant Dartmouth presence: Drs. Elliott Fisher and Tina Foster gave keynote addresses; former DHMC executive vice president Paul Gardent was elected to the organization's executive committee; Dr. Worth Parker, director of graduate medical education (and chair of the ACGME's Institutional Review Committee), gave a presentation to the Council of Committee Chairs; and it was announced that Dr. Paul Batalden will receive the 2007 John C. Gienapp Award to honor his outstanding contributions to graduate medical education.

That's on top of the fact that Dr. David Glass received the Gienapp Award in 2006 for his work chairing the committee that implemented national residency work-hour standards. And that Dr. Richard Dow received the ACGME's Parker J. Palmer Courage to Teach Award in 2005.

Maybe the organization should just plan on holding its 2007 meeting at Dartmouth. L.S.C.



A WINTER WONDERLAND

This winter, middle-schoolers in New Hampshire's Mascoma Valley School District will enjoy skiing, ice-skating, and other outdoor activities thanks to the efforts of DMS third-year students Rahim Nazerali and Ashlee Logan. Nazerali and Logan, who were among DMS's 2005-06 Albert Schweitzer Fellows, joined forces with Mascoma Valley health educators last spring to organize a winter-gear drive as part of their Schweitzer project. The goal of the project was to help in the fight against childhood obesity in New Hampshire. "Childhood obesity was an area that both Ashlee and I felt needed attention," says Nazerali. One of the biggest barriers to physical activity at this time of year, he explains, is the high cost of winter sporting gear.

Thanks to the highly successful drive—which netted 30 pairs of cross-country skis, 55 pairs of ski boots, 22 pairs of ski poles, 21 pairs of ice skates, and 2 pairs of snowshoes, plus assorted other pieces of equipment—Mascoma students will have a fun . . . and active . . . winter this year. A.P.



Ultrasound invention is out-stand-ing

When Dr. Brian Sites, a DHMC anesthesiologist, began offering ultrasound-guided nerve blocks four years ago, he anticipated that patients would choose it over general anesthesia whenever possible. Many people did. But Sites did not anticipate two problems.

First, one person can't do the procedure alone—someone has to hold the ultrasound probe, while someone else injects the anesthetic. And it can be tiring to hold the probe steady, so the images are often unclear.

"Ultrasound exams are ergonomically challenging, and the operators get fatigued," explains Sites, who is now the director of DHMC's Center for Ultrasound Guided Regional Anesthesia (UGRA). "This fatigue results in movement of the ultrasound probe, causing degradation of the ultrasound image," which makes it difficult to know where to insert the needle.

Undaunted, Sites and Dr. Bri-

an Spence, a fellow anesthesiologist who is also a graduate of Dartmouth's Thayer School of Engineering, collaborated with the Dartmouth Entrepreneurial Network; Katherine Hickey, another Thayer alum; and a local consulting company to come up with a solution: the Ultra-Stand, a probe-stabilizing device.

Steady: Now, a clinician can administer UGRA without help because the Ultra-Stand holds the probe steady. The anesthesiologist sees a precise image of where to inject the medication. "One of the benefits of using UGRA," says Spence, "is that you can actually see where you're placing the local anesthesia, where with other traditional techniques you can't."

Before the invention of UGRA, anesthesiologists relied on anatomical "landmarks" to determine the location of the nerve to be numbed. But that technique is limited because anatomical variations among pa-



MARK WASHBURN

Brian Sites—pictured performing an ultrasound-guided regional anesthesia several years ago—has invented a device that makes the procedure easier and safer.

tients make finding the nerves difficult and potentially dangerous. The anesthesiologist might have to insert the needle more than once, causing significant discomfort for the patient. “If you can see where your target area is, you don’t have to use as much local anesthetic, because you don’t have to saturate the area,” says Spence.

Aaron Gjerde, a consultant who is working on a business plan for the device, calls it “a simple solution that just worked. It isn’t complicated, doesn’t need training, and doesn’t need expertise.”

The Ultra-Stand has gone through numerous iterations in the past year, says Hickey. Several patents are pending for the device, and several major distributors and companies are interested in carrying the product, according to Gjerde. Gjerde and Hickey have also received an enthusiastic response from physicians in the American Society of Anesthesiologists.

Psyched: And now Thayer engineering students may be helping to improve the Ultra-Stand. “It’s really the collaborative thing all over again,” says Hickey. “We’re going back and both using Dartmouth resources and adding to some student experiences. . . . We’re pretty psyched about that.”

But the bottom line, explains Spence, “was developing a device that would make our lives easier and make the lives of other regional anesthesiologists easier, such that we can improve patient care.”

DANIELLE THOMAS

CLINICAL OBSERVATION

In this section, we highlight the human side of clinical academic medicine, putting a few questions to a physician at DMS-DHMC.

Lin Brown, M.D.

Associate Professor of Medicine

Brown specializes in rheumatology. After doing a residency in internal medicine and a fellowship in rheumatology at DHMC, she joined the staff in 1985. Her primary clinical interests include vasculitis (inflamed blood vessels) and osteoporosis. She also directs the rheumatology fellowship program.

What made you decide to become a physician?

My college roommate was premed and wondered what I would do with my biology major. “Why not medicine?” she asked.

If you weren’t a physician, what would you like to be?

A botanist, or maybe an exotic dancer.

How has your field changed over the years?

Rheumatoid arthritis was a chronic, progressive, slowly crippling disease before our current era of biologic therapy. These powerful drugs have revolutionized our ability to control the pain and joint destruction without as many side effects.



Of what professional accomplishment are you most proud?

Our DHMC fellowship in rheumatology. This program has survived, grown, and thrived

during an era when many programs lost trainees or lost their accreditation. We not only have more fellows, but they’re top quality.

What advice would you offer to someone contemplating going into your field?

If you like medical mysteries and puzzles, if you love to follow patients over time, if you can live with uncertainty and you want to see all the unsolved medical problems in the hospital, become

a rheumatologist. And with the new drugs, you can frequently make patients better.



What misconceptions do people have about the field?

That it is just about diseases without a cure.

What kind of books and movies do you like?

I like fiction that is poignant but not depressing. My last book was *A Road Through the Mountains* by Elizabeth McGregor. My last movie was *Little Miss Sunshine*. So funny!

Finish this sentence: If I had more time I would . . .

Hike the Appalachian Trail, go to yoga every day, climb all the 4,000-foot mountains in New Hampshire, travel, get gifts on time for holidays, and do more random acts of kindness.

What’s your favorite nonwork activity?

Spending time with Richard, my husband of 33 years (and an honorary internist), and with my three talented (and non-medical) children—Laura, 23; Eric, 20; and Alex, 11.

What do you admire most in other people?

Their composure (I wear my emotions on my sleeve). And their height (I am 5' 1/2")!

What would you do if you won \$1 million in the lottery?

Invest for our family’s future, pay off our house, treat those I love, and give to Revels North, Northern Stage, North Country Community Theatre, Opera North, City Center Ballet, etc.

What historical event would you most like to have been present at in person?

This sounds bizarre, but I would have liked to have been around during the bubonic plague in the town in England that quarantined itself to prevent the spread of the disease. I wonder how I would have responded to this horrific test.

Who is your fictional hero?

Hermione Granger in the Harry Potter books.

What about you might surprise people?

I took belly dancing in medical school.

A SHOT IN THE DARK: New Hampshire became the first state in the nation to offer the new cervical cancer vaccine to girls as part of its standard vaccination program. Dartmouth's chair of pediatrics, Dr. John Modlin, was among those who lobbied for the action.



Dartmouth fosters birth and rebirth in Kosovo

Since 1999, DMS and DHMC have had a presence in the battle-scarred Balkans. The war-ringing has stopped now, but it left the Kosovar health-care infrastructure in ruins. Kosovo's political system is still in transition, but its medical system is now in much better shape thanks to Dartmouth's involvement.

Rate: That involvement has ranged from educational exchanges to library partnerships to clinical initiatives. The most recent initiative was the third DMS-Kosovo project funded by the U.S. Agency for International Development (USAID). Aimed at improving Kosovo's infant mortality rate, it has three subcomponents: the extension of an earlier prenatal project in the Gjakova region to six other regions; a new project focused on perinatology (the care of babies just before and after birth); and a sustainability component, aimed at securing ongoing funding. Dr. James Strickler, emeritus dean of

DMS, and Dr. Donald Kollisch, an associate professor of community and family medicine, are heading up the project.

Strickler is especially committed to the sustainability aspect. Many programs built with foreign aid begin with the best of intentions but disappear as soon as funding runs out. The sustainability component of this project is funded under a USAID mechanism known as a Global Development Alliance (GDA). The intent of GDAs is to forge public-private alliances to stimulate economic growth in underdeveloped parts of the world. DMS is the first medical school ever awarded a GDA. Joining Dartmouth in the effort are a nonprofit called AmeriCares and Webber and Company of Norwich, Vt., a private firm focused on emerging global markets. The three partners will seek immediate financial support and also explore such possibilities as creating a not-for-profit to raise funds

within Kosovo—a novel idea in a formerly communist region.

The reason for the project's focus on babies is that Kosovo has the highest infant mortality rate in Europe—35 deaths per 1,000 babies born, compared to 5 per 1,000 for Europe as a whole. About 10,000 babies a year are born at the University Hospital in Pristina, the capital, and 25,000 more in other Kosovar hospitals. That means if Kosovo's rate were at the European average, over 1,000 additional babies would live past infancy.

Roadblock: The prenatal component of the project hit a roadblock right away, with Kollisch's discovery that pregnant Kosovar women had no medical records. They received no blood pressure checks, diabetes tests, or counseling about smoking and diet. Often, they didn't even see an obstetrician until going into labor. He has now set up a records system and training for doctors and nurses in its use. It will take years to assess the program's effect on mortality, but women are already seeking prenatal care in greater numbers.

To head the perinatal part of the project, Strickler tapped Dr. George Little, a DMS neonatologist with decades of experience in regional perinatal outreach. After a visit to Kosovo, Little was excited about the opportunity for improvement. He found many babies born eight to 10 weeks early whom he felt could be helped immediately. A number were dying because of a lack of fairly simple care, such as the use of surfactant to aid the function of their undeveloped lungs.

Little set as the first objective to care for babies who could survive with a medium level of neonatal care; he plans to address more complex cases later.

Little found the Kosovar staff to be well trained and dedicated, but lacking organization and resources. Equipment is a particular problem—its availability and its maintenance once it's in place. "You can't just use the new devices and drugs after delivery and expect much improvement," says Little. "You need to set up an entire system involving community hospitals, education programs, [and] a transportation system for pregnant mothers. . . . It's extremely important to start with a comprehensive improvement in perinatal care."

Return: That brought Dr. William Young, a DMS ob-gyn with 30 years of experience, into the picture. His precept is: "The best investment of health dollars is in mothers and babies. It is there that the greatest return can be achieved." He hopes to develop a system of integrated maternal and child care in Kosovo. He has a head start because he's hosted many Kosovar exchange students in his home while they're on rotations at Dartmouth. It now gives him great satisfaction to see them in Kosovo as residents in ob-gyn.

It's this kind of understanding that has helped the Dartmouth players in the Kosovar projects appreciate what they're doing—not just improving birthing practices but also participating in the rebirth of a health-care system, an economic system, a society.

ROGER P. SMITH, PH.D.

FLYING SQUIRREL GRAPHICS



George Little, left—pictured here sharing his expertise with a resident in the DHMC Neonatal Intensive Care Unit—has also been sharing his expertise with Kosovo.

THEN & NOW

A reminder of the pace of change, and of timeless truths, from the Fall 1976 issue of this magazine:

“Dr. David Frechette ’70 practices family medicine in the rural Connecticut River Valley town of Woodsville, [N.H.] . . . [He] is a country doctor with a goal: to improve the health-care delivery system in one part of rural New Hampshire. . . . ‘I think,’ he concluded, ‘that a tie with Dartmouth Medical School will be beneficial to upcountry physicians. It will keep us on our toes, so that we don’t stop learning after our residencies.’” Frechette still practices at Woodsville’s Cottage Hospital.



25

Number of beds today at Cottage Hospital

2

Number of Dartmouth medical students who did rotations there in 2005-06

BMT patients can now sleep in their own beds

Erica Miller, a 26-year-old professional dancer, longs for the day when she’s strong enough to return to her teaching job at the Dancers’ Corner in White River Junction, Vt. In March 2005, she was diagnosed with acute myelogenous leukemia (AML). She’s now recovering nicely at home after two rounds of chemotherapy and two bone marrow transplants (BMTs).

Her first round of treatment meant a long hospital stay, but when DHMC started an outpatient BMT program in March 2006, she was one of the first to take advantage of it. “I liked it—I could sleep in my own bed,” says Miller, who lives in West Lebanon, N.H., just a few miles from DHMC. “It was nice to have familiar things around.”

Daily: Typically—and before the outpatient program began—“when someone receives a transplant, we tell them they’re in the hospital for four to six weeks,” says Dr. Kenneth Meehan, director of the BMT Program. Patients need daily treatment and monitoring as bone marrow cells are collected from the patient’s blood (or from a matched donor, such as a sibling); chemotherapy or radiation is administered to kill the cancer cells; and then the bone marrow cells are infused into the patient.

“Then we literally have to wait one and a half to two weeks for the bone marrow to grow,” says Meehan. “It’s like planting a garden. Once the marrow starts to grow, the blood starts to recover.” The patient still needs to

be monitored and receives daily infusions of fluids as part of the recovery process.

Outpatient BMT is a practical option for cancers that have a manageable treatment schedule and predictable side effects, like multiple myeloma, another type of blood cancer.

Mini-transplants—where just enough chemo is given to suppress the immune system before bone marrow cells are infused—can also be done on an outpatient basis. Miller’s second treatment, in the spring of 2006, was a mini-transplant. Her brother was the donor for the first, full, transplant; her sister was the donor for the mini-BMT.

Miller was lucky to live near enough so she could go home after her hours-long daily treatments. For not-so-local BMT outpatients, DHMC arranges for them to stay in a nearby hotel.

Put someone like that “in an outpatient setting, and you empower them,” says Meehan. “You allow them and their family members to participate in their care.”

The program requires the patient to have a full-time caregiver outside the hospital. “We teach the caregivers how to do vital signs, check weights, measure urine output, count the number of bowel movements,” manage medications, and monitor daily progress, says Meehan. “Every single one of our patients who have done this have loved it, absolutely loved it,” he adds.

Comfort: Miller certainly does. And she takes comfort in knowing that help is just a phone call away if she needs it. “I have the highest regard for the whole heme-onc department,” she says. “They are comforting and supportive. Outpatient wouldn’t have worked if they hadn’t been such a good team.”

Laura Stephenson Carter



Ken Meehan, director of DHMC’s Bone Marrow Transplant Program, confers with Elizabeth Kimtis, a bone marrow transplant nurse. Patients can now get BMTs for many conditions on an outpatient basis, instead of being hospitalized for four to six weeks.

NORRIS COTTON CANCER CENTER / HEMATOLOGY-ONCOLOGY

INVESTIGATOR INSIGHT



In this section, we highlight the human side of biomedical investigation, putting a few questions to a researcher at DMS-DHMC.

Barbara Conradt, Ph.D.
Associate Professor of Genetics

*Conradt studies apoptosis, or programmed cell death. She is particularly interested in how apoptosis is regulated and how mitochondria contribute to the process. She uses the roundworm *Caenorhabditis elegans* as a model system in her research.*

How did you decide to become a scientist?

I grew up in the countryside and have always been curious about nature, especially animals. After high school, I worked on farms in the UK and Germany for a year, and I actually started to study agriculture. After a couple of years at college, I discovered the basic biological sciences and decided to switch over to molecular and cellular biology. But I had many other interests as well, such as art and sports.



But I had many other interests as well, such as art and sports.

What are the greatest frustration and the greatest joy in your work?

In science, those often go hand in hand. What can give me a lot of frustration is when we get data that just don't make sense according to our expectations. Through discussions and additional experiments, puzzling data suddenly can make sense. And quite often, they actually reveal new, undiscovered aspects of the processes we are studying. That can give me great joy.

Would you change anything about your career?

My career path could have been straighter, but I don't think I would want to miss the detours because, after all, they have made me into the person and scientist I am now.

If you weren't a scientist, what would you want to be?

Now that I know what it means to be a scientist,

I don't think there's anything I'd rather be. However, if for whatever reason I can no longer be a scientist, I'll open a café with a gallery or bookstore.

What advice would you offer to someone new in your field?

Bring with you a lot of motivation, energy, time, and patience and don't stop having fun.

Who were your scientific mentors?

I was very lucky and had wonderful mentors in college and graduate school and while I was a postdoc. But I also want to add my parents to the list because they taught me very early on how to see and observe.

What's your favorite nonwork activity?

Going for walks and playing the cello. I play classical music: Bach, Breval, and Romberg. And because I am still learning, I have mainly been playing solos or duets with my teacher. Eventually it would be fun to play with a group.

What about you would surprise most people?

I am a certified ski instructor, I started to surf a couple of years ago, and I am expecting my first child in March.

If you invented a time machine, where would you go?

I wouldn't really want to go back in time because women have probably never enjoyed as much freedom and independence as they do nowadays. But I would want to go forward in time, maybe 30 or 40 years. I would want to see what life will look like and how the work of biomedical scientists will have changed the world.

What do you eat for breakfast?

I have been eating oatmeal with fresh fruit for years, and I still enjoy it every morning!

What three people would you like to have over for dinner?

The scientist Barbara McClintock, the painter Georgia O'Keeffe, and the writer Christa Wolf.

Who are your heroes in real life?

My heroes are my brother, who is a two-time cancer survivor, and my mother.

Putting students' clinical learning to the test nationally

The Class of 2006 has posted the best-ever mean score for a DMS class on a national test of clinical knowledge. According to a report from the National Board of Medical Examiners, it is also the highest DMS has been above the national mean since results have been tracked.

The test is part of Step II of the national boards, which each class takes during its fourth year. A total of about 17,000 students took the test last year, and the 56 DMS '06s had a mean score of 229—well above the national mean of 221.

Score: Yet it's not the score but the learning behind it that pleases Dr. David Nierenberg, senior associate dean for medical education. "I don't want to oversell this," he says. "It's only one of three parts of the boards, only one of 15 things we look at. But with all of that, this is really impressive."

Every way this exam could be looked at was impressive for DMS. In terms of the test's core clinical areas—psychiatry, obstetrics, medicine, surgery, and pediatrics, plus the 12 organ system areas—many results were "dramatically above the national average," says Nierenberg.

Step II is an important way station for students, but not the only one, on their journey to becoming licensed physicians. The national boards begin with Step I after they complete their second year. Step II is composed of



TOP TALENT: Dr. James Bernat, a DMS neurologist, was one of 16 speakers from around the world invited by the Vatican's Pontifical Academy of Sciences to give a paper at a meeting called "The Signs of Death."

two parts—clinical knowledge (CK) and clinical skills (CS). Step II CK is an all-day, multiple-choice test taken on a computer in a locked room. Step II CS requires students to diagnose 12 patients played by actors. They have 15 minutes to complete each case. This test has been required for only two years, and DMS students have been doing very well in it.

Licenses: Finally, the Step III board exam comes at the end of their internships, before they apply for medical licenses to practice independently.

But recent changes across much of the country are speeding up the testing timetable. Step II formerly could be taken any time during fourth year, but it was recently moved to the fall at DMS so students have their scores in hand when they apply for residencies. Earlier testing also helps students obtain a training medical license before beginning internship—a fairly

new requirement in 41 states, including New Hampshire.

DMS does everything it can to help students prepare for the boards. One new aid is a computer program called Exam Master so they can review thousands of practice questions of the type that appear on these exams.

"I suggest to students they may want to take a few days off to review material," says Nierenberg. "You do want to pass it on your first attempt."

Prepare: "I'm very proud of how our medical students are doing," he adds. He explains that DMS hasn't broken into the "top 10" tier of medical schools because such rankings are based heavily on research funding and DMS is not as big as many research universities. But, Nierenberg concludes, "I honestly believe that if you measure medical schools by how well they prepare students... we're a 'top 10' medical school."

ROSEMARY LUNARDINI

A MATCH MADE AT DHMC

Many couples promise to care for each other in sickness and in health. But Peter Pardoe wanted to do more than just care for his sick wife, Jody—he wanted to donate one of his kidneys to bring her back to good health.

Devotion alone does not ensure a good match, however: the Pardoes' blood types were incompatible. Fortunately, another couple in the same straits were compatible with the Pardoes and willing to participate in a complex and rare four-way surgical swap, or paired exchange. On September 12, 2006, DHMC's first-ever paired kidney exchange took place, with each husband donating a kidney to the other's wife. For all involved, the surgery was a success.

Transplants from living donors do better than organs from someone who has died, according to Dr. David Axelrod, who led the surgical team. Over 89,000 U.S. patients are currently waiting for an organ transplant and nearly 4,000 new patients are added to the waiting list each month. A.P.



"DOING SOMETHING RIGHT"

A national award for pediatricians-in-training has been bestowed on a DMS graduate for the second time in four years. The 2006 recipient of the American Academy of Pediatrics' Anne E. Dyson Child Advocacy Award is Dr. Gary Maslow '04. He was picked for establishing a group called The Adolescent Leadership Council (TALC) at Hasbro Children's Hospital in Providence, R.I., where he is a third-year resident. TALC gives teens with chronic illness a social support network and a voice to improve the care of other children with chronic illness. "It was modeled on DHMC's STAR [Steps Toward Adult Responsibility] program," says Maslow, who worked with STAR at DMS.

TALC brings together 10 teenage patients and 10 Brown University student mentors—all of whom live with a chronic illness. The group meets monthly and makes presentations at area high schools and hospitals. Dr. John Modlin, chair of pediatrics at Dartmouth, was "very pleased, but not surprised, that Gary has been given this award."

The Dyson Award was presented in 2003 to Dr. Tommy Clark, a 2001 DMS graduate. Modlin says such honors are "a nice reminder that we are doing something right at DMS when we are able to attract students of [this] caliber and watch them begin careers armed with the right values." A.P.



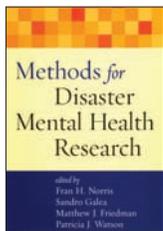
FLYING SQUIRREL GRAPHICS



These members of the DMS Class of 2006 are pictured on the day of their White Coat Ceremony in 2002. The '06s recently passed another milestone, getting the results of a national exam testing their clinical knowledge; the class did very well.

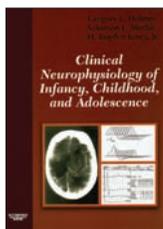
**New on the bookshelf:
Recent releases by
DMS faculty authors**

Methods for Disaster Mental Health Research. Edited by Fran H. Norris, Ph.D., research professor of psychiatry at DMS; Matthew J. Friedman, M.D., Ph.D., professor of psychiatry at DMS; et al. Guilford Press; 2006. This book examines research



into the psychological effects on people and communities of large-scale disasters and terrorism. It covers public mental health planning and evidence-based treatments for traumatic stress, as well as issues involved in the study of specific populations, such as children.

Clinical Neurophysiology of Infancy, Childhood, and Adolescence. By Gregory L. Holmes, M.D., professor of medicine at DMS; et al. Elsevier; 2006. Much of clinical neurophysiology is based on studies of adults; though many of the field's techniques can be modified for children, this text-



book focuses on neurophysiologic testing specifically for children. It describes unique age-specific patterns as well as testing for seizures, toxic and degenerative diseases, head trauma, spinal muscular atrophies, and many other conditions.

MEDIA MENTIONS: DMS

Among the people and programs coming in for prominent media coverage in recent months was a DMS orthopaedic surgeon who is leading a multisite back-surgery study known as SPORT (Spine Patient Outcomes Research Trial). In November, results comparing surgical and nonsurgical treatment of herniated disks were available. “We basically found that [for] people who had



very significant symptoms, that surgery, in fact was better,” Dr. **James Weinstein** told Katie Couric on CBS’s *Evening News*. “However, what was really interesting is that patients who decided not to have surgery, who could wait, also did really well.” Dozens of

other media outlets featured the study results, including CNN, National Public Radio’s *All Things Considered*, the *International Herald Tribune*, the *New York Times*, and *USA Today*. “Trying to find an answer to the surgery vs. nonsurgery question for herniated discs is important, Weinstein said,” in the *Chicago Tribune*, “because the number of spinal operations has been increasing and the rate of these surgeries can vary greatly in different regions.” (For more on this study, see page 3.)

The press also tapped another DHMC physician for comment on the SPORT results. “By the two-year mark, the researchers found, the nonoperative group had improved considerably, even though surgery patients still maintained a slight edge,” *U.S. News & World Report* explained. “Still, ‘this study supports nonoperative treatment for patients who can manage their pain,’ [said] Dr. **William Abdu**, medical director of the Spine Center at Dartmouth-Hitchcock Medical Center and one of the authors” of the study.



In November, a U.S. Food and Drug Administration advisory panel recommended the approval of a new test that detects whether breast cancer has spread to the lymph nodes or not. But, as the Reuters wire service noted, the panelists—including a Dartmouth physician—“questioned how well the test would help determine the best

care for patients.” Panelist “**Marc Ernstoff**, a cancer immunologist at Dartmouth-Hitchcock Medical Center in New Hampshire” explained, “I think what you’re hearing from the panel is ‘Yes, let’s proceed forward but cautiously.’”

Susan Dentzer, a Dartmouth alumna and correspondent for PBS’s *NewsHour*, recently profiled a soldier whose face had been destroyed in an explosion in Iraq. One of the clinicians whom the soldier’s wife “considers an angel,” reported



Dentzer, “is [the soldier’s] plastic surgeon, Dr. **Joe Rosen**. He normally practices at Dartmouth-Hitchcock Medical Center in New Hampshire but was called in by Walter Reed [Army Medical Center] as a consultant” for this case and others. “We can only do so much at each stage,” Rosen told the soldier. “But if we’re willing to be patient . . . each three months we can do another stage and make it better until you’re satisfied.”

A sugar found in crabs and shrimp “seems to protect against the build-up of nasty bacteria and yeast colonies called biofilms,” the *Atlanta Journal-*



Constitution reported in an article about some recent research. “**George O’Toole**, an associate professor of microbiology and immunology at Dartmouth Medical School, expressed some reservation” about the research, however. “This would be a terrific advance if this proved to be true, particularly because there is an advantage in using a non-antibiotic coating that can’t be understated,” O’Toole said. ‘Antibiotic coatings in catheters, for example, are a terrible idea because they will likely contribute to the development of [drug] resistance in the long run. . . . However . . . many people have worked on this for many years without—to my knowledge—many effective results. So, I would have to see more research.’”

V8 juice, Campbell’s Healthy Request tomato soup, and nearly all yogurt with fruit didn’t make the cut in Hannaford Brothers’ new Guiding Stars

A N D D H M C I N T H E N E W S

nutritional rating system, noted a recent *New York Times* article. Why? “Many products that are marketed as healthy received zero stars from Hannaford because they contain too much salt or sugar or not enough nutrients, said **Lisa Sutherland**, a research assistant professor of pediatrics and a nutrition scientist at Dartmouth who was part of the advisory panel that developed Hannaford’s formula.” V8, for example, is “like drinking a vitamin with a lot of salt on it,” Sutherland told the *Times*.



“Black, Latino, and Asian patients are more likely than whites to have high-risk surgeries at California hospitals that have less experience doing the procedures,” read a *Los Angeles Times* article about a study that appeared in the *Journal of the American Medical Association*. “In an editorial accompanying the report,” the *Times* noted, “Dr. **Samuel Finlayson** of Dartmouth Medical School examined some of the reasons for the disparities. ‘The easiest explanations for why ethnic minority and poorly insured patients are less likely to use high-volume hospitals are that they cannot [because of barriers to access] or that they may not be aware of other options,’” Finlayson wrote.



South Carolina’s largest newspaper called on “pain expert **Joyce DeLeo** of Dartmouth Medical School” twice last fall. “Each year, sickle cell patients experience two bouts, on average, of severe pain,” the *State* reported in an article about a University of South Carolina study on “why pain early in life can heighten pain later” in such patients. “There hasn’t been a lot of research focusing on early development of pain,”



DeLeo pointed out. In the other article, “DeLeo, a professor of anesthesiology, and of pharmacology and toxicology” weighed in on a pain assessment scale that uses photographs of babies in varying states of discomfort and of varying races. “‘You want the [child] to associate the picture with what he or she looks like and what the family looks like,’ she said.”

“Babies who die of SIDS [Sudden Infant Death Syndrome] apparently have not developed a sort of ‘alarm system’ that would make them respond to rising carbon dioxide levels by turning their heads and breathing harder,” the author of a recent study told the *Boston Globe*. “Dr. **Gene Nattie**, a Dartmouth physiology professor who researches SIDS but was not involved” in the study, explained to the *Globe* that “to have these kinds of clues . . . gives investigators who want to find ways that biology could go awry, and cause death, a much better handle on where to start.”



A recent study done at another institution concluded that “performing annual CT scans on smokers and others at risk for lung cancer could prevent ‘some 80 percent of deaths from lung cancer,’” *Slate* magazine reported. To explain why “many radiologists and cancer specialists . . . are unconvinced” by the study, as the *San Francisco Chronicle* explained it, both publications turned to a Dartmouth radiologist. “Dr. **William Black** of Dartmouth-Hitchcock Medical Center, and a principal investigator in the National Lung Screening Trial,” told the *Chronicle* that the study “ran the risk of being skewed by scans that detected small tumors that would never have developed into life-threatening cancers. He said he is also concerned that, as the resolution of CT



scans improves, tests will show increasing numbers of tiny nodules in the lungs of patients that will set off alarms but are not cancerous.”

Plunging necklines and bare midriffs—on young doctors and medical students—were the subject of an essay in the *New York Times*. Lamenting “less-than-professional attire” among many of her younger colleagues, the author consulted “a behavioral scientist and director of the office of professional development at Dartmouth. ‘Poor choice is not regional—I’ve seen it everywhere,’ said Dr. **Pamela Rowland**, . . . who has studied the impact of physician clothing on patient confidence. . . . ‘Patients don’t have your CV in front of them, and appearance is all they have to go by,’ Dr. Rowland said. ‘If you don’t meet their expectations, their anxiety level increases.’”



“Research by a professor at Dartmouth Medical School aims to help physicians in Missouri lower their overhead and help their patients take more active roles in improving their health.” So began an article in the *St. Louis Post-Dispatch* about a project that “teams researchers at Dartmouth” with a local coalition and state health-care improvement officials. “The project is based on a concept called ‘micro practice.’ The idea is to set up a low-overhead, efficient, and patient-centered practice. . . . ‘High overhead is toxic,’ said Dr. **John Wasson**, a professor of community and family medicine at Dartmouth and lead investigator on this project. ‘It passes on to the patients in the form of minimal time . . . to the payor in the form of higher cost, and . . . to the clinician in the form of dissatisfaction.’”



scans improves, tests will show increasing numbers of tiny nodules in the lungs of patients that will set off alarms but are not cancerous.”



CARE TACTICS: *The American Journal of Nursing* presented its 2006 AJN-Beatrice Renfield "Caring for the Caregiver" Award to Samuel and Annette Levine of Hanover, N.H., in recognition of their longtime financial support for nursing at DHMC.



Emeritus rank doesn't necessarily equate with being "retired"

Two longtime Dartmouth Medical School faculty members were named by the Dartmouth Trustees to emeritus status during 2006. The word "emeritus"—which comes from the Latin *emereri*, meaning to serve out one's term in an office or position—is often equated with the word "retired," but that's not necessarily always an apt association.

E. Robert Greenberg, M.D., who was the director of Dartmouth's Norris Cotton Cancer Center from 1994 to 2001, has moved to Seattle, where he is an affiliate at the Fred Hutchinson Cancer Research Center. "I still do some cancer prevention research and am trying to focus on health issues in the low- and middle-income countries of the world," he wrote in an e-mail several months ago.

Greenberg earned his M.D. at the Case Western Reserve University School of Medicine and did his residency in internal medicine at Dartmouth. Soon after joining the DMS faculty in 1974, he began to devote himself to studying the causes and prevention of cancer. He is well known for his epidemiological studies of beta-carotene and its possible role in preventing cancer.

Now he is trying to initiate a

large clinical trial studying gastric cancer prevention in Latin America. "It's an immensely important, but largely ignored, health problem in much of Central and South America," Greenberg says.

Robert Fairweather, M.D., Ph.D., after spending 10 years as a chemistry professor at the University of Connecticut, decided to give up chemistry in 1979 for a career in medicine. Now, after more than 20 years at DHMC, he's ready for another change.

Fairweather received his doctorate in chemistry from Columbia University in 1967 and his M.D. from the University of Connecticut School of Medicine in 1983. He did his residency in anatomic and clinical pathology at Dartmouth from 1983 to 1987 and joined the faculty soon after.

He served as chief of the DHMC Section of Clinical Pathology from 1990 to 2000 and as medical director of the Hematology Laboratory from 1990 to 2006.

As part of his research on blood coagulation and clotting disorders, he helped to develop the D-dimer assay, which has become an important diagnostic tool for detecting blood clots in the lung.

Fairweather is now looking forward to playing golf, skiing, going to plays and concerts more often, and playing classical guitar at recitals and other gatherings.

Laura Stephenson Carter



Worthy of note: Honors, awards, appointments, etc.

Mark Israel, M.D., director of the Norris Cotton Cancer Center and a professor of pediatrics, was recently elected to the board of directors of the Association of American Cancer Institutes. The association promotes the common interests of the nation's leading academic cancer centers.



Jennifer Loros, Ph.D., a professor of biochemistry, was elected a fellow of the American Association for the Advancement of Science, as a member of the Section on Biological Sciences.

Carolyn Kerrigan, M.D.C.M., a professor of surgery, was named president of the Plastic Surgery



Educational Foundation, the educational and research arm of the American Society of Plastic Surgeons. She is also chief of plastic surgery at DHMC and director of the plastic surgery residency program.

Michael Zegans, M.D., an associate professor of surgery, was appointed to the board of directors of the Ocular Microbiology and Immunology Group, a society affiliated with the American Academy of Ophthalmology.

Anikó Náráy-Fejes-Tóth, M.D., a professor of physiology, has been ap-

pointed associate editor of the journal *Endocrinology*.

Corey Siegel, M.D., an assistant professor of medicine, received a



Research Excellence in GI and Liver (REGAL) Award for a paper he published in the journal *Clinical Gastroenterology and Hepatology*. The REGAL Awards are sponsored by the University of Kansas Medical Center and several pharmaceutical and medical device companies.

John Butterly, M.D., an associate professor of medicine and



DHMC's executive medical director, received the Medical Staff Award of the New Hampshire Hospital Association. The award recognizes outstanding service to hospital and community.

H. Worth Parker, M.D., an associate professor of medicine, has



received the Robert Kerr Founder's Award from the American Lung Association's New Hampshire chapter, for his work to improve the lives of those with lung disease, especially cystic fibrosis.

Lee Witters, M.D., a professor of medicine, received Dartmouth College's inaugural Linda and
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Worthy of note

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Paul Gridley Faculty Fellow award. It is given to a faculty member who “enhances the integration of students’ academic and social lives by interacting with students outside the classroom.” He is the adviser of the undergraduate premedical society.

Robert Zwolak, M.D., Ph.D., a professor of surgery, was appointed to the physicians’ advisory board of Humana, Inc., a managed-care organization based in Louisville, Ky.

Jeanine Mills, M.S., R.D., an outpatient dietitian at the Norris Cotton Cancer Center, was named the 2006 Outstanding Dietitian of the Year by the American Dietetic Association’s New Hampshire chapter.

DHMC was ranked as one of the nation’s **Top 100 Cardiac Hospitals** by Solucient, a health-care data firm. The rankings were published in *Modern Healthcare* magazine.

The 2006 **Best Benefits Practice Award** was presented to DHMC by the New England Employee Benefits Council, for innovation and creativity in employee benefit programs.

DHMC received **eHealthcare Leadership Awards**

from eHealthcare Strategy and Trends, which recognizes the best health-care websites. DHMC’s online “Quality Reports” (see www.dhmc.org/qualityreports) won a platinum award in the Best Quality Communication category, and the “Patient Online” service won a silver award as a Best Interactive Site.

DHMC was recently presented with an **Organ Donation Medal of Honor** by the Department of Health and Human Services.

The Environmental Protection Agency put DHMC on its **Best Workplaces for Commuters** list once again in 2006.

The White River Junction, Vt., VA Medical Center was chosen to receive a 2006 **Circle of Excellence Award** from the U.S. Department of Veterans Affairs. It was the second straight year that the VA received this award.

Errata: An article in the Fall “Vital Signs” section about the establishment of a DMS chapter of a national humanism in medicine society contained two errors. The name of the group is the Gold Humanism Honor Society, and the organization that established the society was founded by Arnold Gold, not Ronald Gold. We are . . . if you’ll pardon us . . . guilt-stricken about the errors. ■

Letters

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Murals for the ages

I recently learned of the death of Sol Levenson, the fine artist who produced a number of large murals for the corridors of Dartmouth’s Norris Cotton Cancer Center. When I was still teaching at DMS, I frequently watched him at work and admired his unusual skill.

I hope the murals are still in place, for they added much to the ambience of what can be a threatening environment for patients awaiting chemotherapy or surgery.

JOHN RADEBAUGH, M.D.
Falmouth, Maine

The murals are still very much in place. See http://dartmed.dartmouth.edu/winter05/html/vs_levenson.php for more about Levenson and his artistic legacy.

Essence of caring

I was recently trying to find Dr. Ann-Christine Duhaime on the internet. In my search, I found your Fall 2005 profile of her. I broke down and cried while reading it, it was such an accurate description.

Dr. Duhaime was my daughter’s doctor from 1993 until she left Children’s Hospital of Philadelphia. I miss her tremendously. Three neurosurgeons have been assigned to my daughter’s case since then and none have lived up to her standards. The article absolutely captured her essence, and I thank you for publishing it. I hope your hospital appreciates her as much as I did.

MARY ANN D’ORIA
Hamilton Township, N.J.

To read the profile of Duhaime, go to http://dartmed.dartmouth.edu/fall05/html/faculty_focus.php.

Cover to cover

As a public guardian for the Vermont Agency of Human Services, I accompany clients to DHMC about once a month and have done so for about 15 years. Whenever I’m there, the first thing I do is look for a copy of your magazine to take home, and I read it from cover to cover. Would you please add my name to your mailing list?

SEDNEY R. ULRICH
Hyde Park, Vt.

We’re happy to add interested individuals to our mailing list. See page 25 for details. ■