

SUNDOWN: Sun exposure early in life is related to rising skin cancer rates—but try telling that to an adolescent. Actually, DMS's Dr. Ardis Olson has done so, with measurable success, through a program called SunSafe in the Middle School Years.



JOHN GILBERT FOX

Modlin is worried about a viral threat.

and paralysis may soon follow. Early symptoms of enterovirus 71 can include hand-foot-mouth syndrome. Common to other enteroviruses, too, the syndrome causes a fever; sore throat; and painful red bumps on the hands and feet, inside the mouth, and sometimes on the buttocks. As in polio, if neurologic illness does develop, enterovirus 71 begins to invade the ventral brain stem, cerebellum, and spinal cord; this can cause a number of serious neuromotor problems, such as paralysis of one or more extremities, as well as acute pulmonary edema, or fluid in the lungs.

Vaccine: There is now no vaccine for the virus, but the Soviet Union developed one in the 1970s when Bulgaria had a large outbreak. But the outbreak subsided and the vaccine was never used, so it's unknown whether it would have been effective.

Yet "it should be technically feasible to produce a vaccine," Modlin feels. For a [WEB EXTRA](http://dartmed.dartmouth.edu/summer07/html/vs_virus_we.php) with Modlin, see dartmed.dartmouth.edu/summer07/html/vs_virus_we.php.

Laura Stephenson Carter

Who would import RICE to Vietnam?

You'd think bringing RICE to Vietnam would be like importing maple syrup to New England. Except this RICE is an acronym for "remote interaction, consultation, and epidemiology," a DMS project to transform the Vietnamese health-care system using cellular smartphones.

If people in Vietnam need more than routine health care, they often bypass their local clinic and go directly to a central hospital, where they feel the care is better. RICE is building a system that will enable central hospitals to share expertise and resources with rural areas.

Link: In March, the director of DMS's biomedical libraries, William Garrity, and other Dartmouth volunteers spent 13 days in Vietnam on a RICE pilot project. They tested a smartphone link between the National Hospital of Pediatrics (NHP), located in Hanoi, and rural clinics and regional hospitals. Smartphones have tiny keyboards, internet and e-mail access, and basic productivity software. A lot of Vietnamese clinicians already use them, Garrity says. "Nobody uses landlines out there. Everyone has a mobile."

Smartphones can be used for consultations between physicians, as well as to transmit educational information, share the NHP's digital library holdings, convey information on patient transfers, track disease incidence, and provide access to rudimentary medical records. With more information, physicians at remote facilities can be more ef-

fective, says Garrity. And if patients can get appropriate care at local clinics, they may be less likely to rush to the overcrowded central hospitals. The situation there is similar to what would happen "if everybody with the sniffles in the Upper Valley came to DHMC and didn't go to their closer facility"—not an efficient way to run a health-care system, says Garrity.

Since rural Vietnam is a potential nidus for pandemic flu or SARS, if sick people travel from rural areas to major cities they may spread infection along the way. But if they seek care locally, a pandemic could be contained early. Further, clinics could use smartphones to quickly report outbreaks.

During the trip, Garrity gave presentations to NHP librarians

and physicians on information technology. He also accompanied the team on visits to rural clinics to help identify their informational needs.

Key: Garrity's expertise as an information specialist is key to the project, says DMS plastic surgeon Dr. Joseph Rosen. Rosen organized RICE in 2005; got funding for it from Microsoft, with help from Dr. Eliot Grigg, a 2001 Dartmouth College graduate; and led the March trip.

RICE's long-term goal is "to identify, secure, and deploy PC- and smartphone-based clinical decision-support tools" to foster better and more integrated health care, says Garrity. He hopes in the near future that an NHP librarian can visit DMS and another DMS librarian can visit Hanoi—bringing maple syrup, perhaps?

Kelley Meck

If sick people seek care locally, a pandemic could be contained early.

WILLIAM GARRITY



This rural Vietnamese village was one of several the DMS team visited. For a [WEB EXTRA](http://dartmed.dartmouth.edu/summer07/html/vs_hanoi_we.php) slide show, see dartmed.dartmouth.edu/summer07/html/vs_hanoi_we.php.



TEA-TOTALER: A DMS study of the correlation between tea consumption and skin cancer incidence found that subjects who drank two or more cups of tea a day had a 65% lower risk of squamous cell carcinoma. Lemon boosted the effect.

cess, how do we make appointments, what's really our commitment to getting patients in here in a timely way?" says Formella. She anticipates improving information technology, performance reviews, and clinical and administrative systems.

"We've been an organization that has been good at launching a project, and we don't hold our own feet to the fire," she adds. "We're designing these improvement projects in a way that—the best way I can say it is—will hold our own feet to the fire—[by developing] metrics and . . . building accountability."

Formella—who has more than 30 years of experience as a staff nurse, a clinical nurse specialist, and a nursing executive—came to DHMC as senior nurse executive in 1999. She had previously worked for a national consulting firm for three years and before that held leadership positions in Mayo system hospitals for 15 years.

Magnet: In 2003 she led the effort to obtain Magnet status in nursing for DHMC. In 2004 she was named Nurse Leader of the Year by the New Hampshire Nurses' Association. And in 2005 she was honored for Nursing Management Excellence by the New Hampshire Organization of Nurse Leaders. She holds a B.S.N. from the University of Iowa and an M.S.N. from Marquette University.

"It is so humbling to be asked to take on this role at this time in this organization's history," says Formella. "It is just very, very gratifying."

Laura Stephenson Carter

Too much coursework? Try some hair of the dog!

For medical students whose "chief complaint" is intense coursework, a proven cure seems to be more courses. Courses, that is, that they've designed or on subjects that they've chosen.

Electives organized by students let them "follow their passions and not lose parts of themselves" to the rigor of medical school, says Dr. Joseph O'Donnell, senior advising dean. And students are often "way ahead on societal trends," he adds, so it's not unusual for elective subjects to later be absorbed into the formal curriculum.

Kalindi Trietley, the director of learning and disability services, coordinates these "enrichment" electives. She says the program allows DMS to be sensitive to "pockets of interest that aren't big enough for a course but [are] very valid." There are more than 30 current offerings, on topics from wilderness medicine to medical Spanish. The program, now 10 years old, includes both student- and faculty-initiated courses; each is overseen by a faculty member.

Two electives offered last term—Medical Anthropology and the Art and Craft of Medicine—offer a window on why and how such courses come to be.

Katherine Ratzan's interest in medical anthropology dates from some courses she took before coming to DMS. "I thought others might find the perspective from that field . . . refreshing," she says. She set up six lectures;

one, "Asian Medical Systems in Interaction with Biomedicine," was given jointly by a U.S. physician and a Tibetan physician. "Students discussed the idea that science itself is culturally mediated," Ratzan says, "and this must be kept in mind when interacting with patients who do not hold the same set of beliefs."

The art elective had its genesis when Daniel Kaser took a one-year leave from DMS to pursue his interest in art (see dartmed.dartmouth.edu/fall06/html/student_notebook.php). This experience reinforced his belief in the importance of art in healing. Upon his return to DMS, he organized a course combining studio work with classes led by an educator at Dartmouth's Hood Museum of Art. "Students are encouraged not only to draw, but to talk about what they have drawn," Kaser says. "Further, we look at objects in the Hood galleries . . . and discuss what we see. This practice of observation and oral presentation is critical to medical encounters."

Wake: O'Donnell likens such electives to "letting a thousand flowers bloom." He sees them as part of the constant renewal of the formal curriculum. For example, he says, international health is a subject on which "the institution is coming along" in the wake of student interest.

See <http://dms.dartmouth.edu/admin/olads/enrichment.shtml> for more about the enrichment electives.

JAMES DiCLERICO

THEN & NOW

A reminder of the pace of change, and of timeless truths, from the Spring 1987 issue of this magazine:

In an article titled "Pernicious Weed," Dr. A. Stuart Hanson, DMS '60, wrote: "As an internist specializing in pulmonary disease, I had begun to realize [10 years previously] that I was making my living from the end results of cigarette smoking. My mentors in pulmonary disease had trained at tuberculosis sanatoriums . . . but what I was seeing now, in my own practice, was a new set of pulmonary diseases that were in large part caused by tobacco."



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Mentions since then in the magazine of tobacco's effects or of smoking cessation

1992

Year DMS students began a tobacco-education initiative in local schools

A BIG DEAL: DHMC recently acquired a large-bore MRI machine. Such scanners accommodate claustrophobic or obese patients more easily than conventional machines, and with much better resolution than open MRI scanners.



We do not have permission to include in our online edition the text that was in this box in our paper edition.

Match Day brings another sort of March madness

For fourth-year medical students, March madness has nothing to do with basketball. Instead, their frenzy centers on a day in March when all soon-to-be-doctors find out where they'll continue their training after they graduate.

Lively: Match Day, which fell this year on March 15, is a lively, informal ceremony at DMS—and 2007 was no exception. All the students gather at noon and, one by one, come up to receive their residency assignments in sealed envelopes. Some students tear open the envelope and read their letter before they even make it back to their seat, while others wait for a more private moment to peek at what their future holds. Laughter, gasps, shrieks of joy, and misty eyes always mark the occasion.

"The results were superb," Dr. David Nierenberg, senior associate dean for medical education, wrote to the DMS community shortly after the event, "as we are now in the habit of seeing virtually every March."

Of the 54 students slated to graduate this year, 47 participated in the National Resident Matching Program (NRMP); 2 chose military residencies; and 5 are deferring residency. Internal medicine was the most popular choice of specialty at DMS, followed by pediatrics, orthopaedic surgery, and diagnostic radiology. In tune with the national trend, many fewer students chose fam-

STORM WINDOW: Daniel Pluta, a DHMC radiology technician, and his 16-year-old son spent February vacation week with a church group from Hanover volunteering in one of the New Orleans neighborhoods most devastated by Hurricane Katrina.



SPIRITED PITCH ABOUT AGING

"I wanna be sedated!" bellowed the rowdy, elderly men and women gathered in DHMC's Main Rotunda. No, it wasn't a group of patients run amok. It was a performance by the talented, world-renowned Young@Heart Chorus, featuring singers who range in age from 71 to 93 years old.

The group's DHMC performance was a sneak preview of one that rocked a concert hall at Dartmouth's Hopkins Center the following evening. The chorus, founded in 1982 and based in Northampton, Mass., was in the Upper Valley in conjunction with the 2007 Dartmouth Community Medical School course, titled "The New Thinking About Aging: Fostering Health, Coping with Frailty."

But these feisty singers proved that they were anything but frail as they belted out tunes by groups like Sonic Youth, Radiohead, OutKast, and the Beatles. And they closed each performance by imploring their audiences to—in the words of Bob Dylan—stay "Forever Young." L.S.C.

KAWAKAHAMINA



STATE-OF-THE-ART CONCEPT

So your grade-school art teacher said you had no artistic talent? Nonsense, says former ICU nurse Kathy Parsonnet, who's been DHMC's artist in residence since 2005. In search of an art form that was "affordable, not wasteful, and fairly easy for any patient to use," she invented Fraglets Art—hand-painted magnetic forms in assorted shapes and sizes that can be arranged and rearranged on a metal "canvas" to create a . . . masterpiece.



Though people don't get to keep their Fraglets creations, Parsonnet takes a digital picture of each work and leaves a copy with the artist. She brings the materials back to her studio, disinfects the pieces, and then reassembles the kits for the next set of artists—whether they are hospitalized patients, employees, or residents of skilled nursing facilities.

"I'm a very frugal artist," she says. "I like using things over and over." For more information, see www.fragletsart.com. L.S.C.

Calling "My Old Kentucky Home," for a week

Forget storks and cabbage patches. In the Appalachian hills of southeastern Kentucky, home of the Frontier Nursing Service (FNS), parents have a different way to explain where babies come from. In 1925, when the FNS started, nurse-midwives rode on horseback to deliver babies around the rural region, so "little children were told that babies arrived in the saddlebags," says DMS student Julie Zitzler. She was one of seven DMS students—four M.D. first-years and three Center for the Evaluative Clinical Sciences (CECS) students—who made a one-week spring service trip to Kentucky. They shadowed caregivers at the FNS's hospital and rural clinics and volunteered in an after-school reading program and a food pantry.

Idea: Sarah Dotters-Katz, a first-year who was born in rural Kentucky, came up with the idea for the trip after doing a summer internship at the FNS. The FNS includes the 25-bed Mary Breckenridge Hospital, five rural clinics, a home-health service, and the Frontier School of Midwifery and Family

Nursing—the largest such school in the United States.

Jobs: Leslie County, where the FNS is located, has a population of 12,000 and an unemployment rate of 8.8%. Other than coal mining, jobs are scarce. Rates of both drug use, legal and illegal, and teen pregnancy are high.

The FNS is working to address the former problem, as the DMS group discovered. Many of the students helped out in a detox program that uses opiate-receptor-blocking implants to treat patients addicted to oxycotin and methadone. "They had only been doing this for a couple of months and they had put in more than 100 implants," says Dotters-Katz. "And they weren't advertising—it was [just] word of mouth that was spreading around the community."

The students also saw colonoscopies, laparoscopic gall-bladder surgery, and a hysterectomy.



These seven DMS students spent their spring break not lounging on a beach but volunteering in the hills of rural Kentucky.

FEELING NO PAIN: DHMC's Richard Barrett Pain Management Center was one of 14 pain centers nationwide (one of just two in New England) honored in the American Pain Society's first-ever Clinical Centers of Excellence in Pain Management Awards.



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

Victor Ambros, Ph.D., a professor of genetics, was elected to the National Academy of Sciences for “distinguished and continuing achievements in original research.” He was also recently elected a fellow of the



American Academy of Microbiology. In 1993, Ambros's lab reported the first small regulatory RNA and since then has documented an array of genes for diverse microRNAs.

John Wennberg, M.D., director of the Center for the Evaluative Clinical Sciences, was once again named one of the 50 most powerful physician executives by *Modern Healthcare*.

Mark Israel, M.D., director of Dartmouth's Norris Cotton Cancer Center, was elected to the Association of American Physicians, which each year taps 55 individuals who have attained excellence in the pursuit of medical knowledge.



Madelaine Dalton, Ph.D., an associate professor of pediatrics, received an honorary doctor of science degree and was the commencement speaker at Alfred University, her alma mater.

Lori Alvord, M.D., an assistant professor of surgery and associate

dean of student and multicultural affairs, gave the commencement address at the University of Vermont College of Medicine.

Robert McLellan, M.D., M.P.H., an associate professor of medicine, was recently named president of the American College of Occupational and Environmental Medicine.

Judy Stern, Ph.D., an associate professor of obstetrics and gynecology, was elected president of the New England Fertility Society. She begins her term in 2008.

Gregory Tsongalis, Ph.D., an associate professor of pathology, has joined the American Association for Cancer Research Cancer and Leukemia Group B Pathology Committee.

Constance Brinckerhoff, Ph.D., a professor of medicine, was selected to serve on the Arthritis, Connective Tissue, and Skin Study Section of the National Institutes of Health Center for Scientific Review.



Richard Comi, M.D., an associate professor of medicine, was recognized by *Men's Health* magazine as one of the country's top endocrinologists.

David Alexrod, M.D., an assistant professor of surgery, received a 2007 American College of Surgeons Health Policy Scholarship.

Timothy Lukovits, M.D., an assistant professor of medicine; **Connie Thompson**, R.N.; and the DHMC Stroke Program recently received an Initial Performance Achievement Award from the American Stroke Association.

Stephen Spielberg, M.D., Ph.D., DMS's dean, was reappointed to a second four-year term by Dartmouth College President James Wright. “Steve has brought to his position a great deal of enthusiasm and energy, the ability to work well with others across the institution, and a great deal of personal integrity,” Wright wrote in an announcement to the Dartmouth community. A pediatrician and a pharmacologist, Spielberg came to DMS in 2003 from leadership positions in academic medicine and the pharmaceutical industry.

Paul Kispert, M.D., an assistant professor of surgery and of anesthesiology, and two residents—**S. Theresa Lau**, M.D., ob-gyn, and **Kane Anderson**, M.D., orthopaedics—are the recipients of DHMC's 2006-07 Alma Hass Milham Award, for those who “best exemplify human and ethical values in the practice of medicine.”

William Boyle, M.D., a professor of pediatrics, was honored by the Town of Hanover, N.H., which named its new \$5-million water filtration plant after him. He has been Hanover's health officer since 1986.

Debraj Mukherjee, a 2007 DMS graduate, was named a Sommer Scholar and selected for the DeRosa Leadership Program at Johns Hopkins, where he will enter the M.P.H. program. He was also awarded a Schweitzer Fellowship at Hopkins to develop a smoking-cessation program for adolescents.

Abigail Rao, a DMS Year 3, and **Andrea Russo**, a DMS Year 4, were named Howard Hughes Medical Institute-National Institutes

of Health Research Scholars.

Patricia Roberts, medical staff coordinator in the Office of Clinical Affairs, was named president of the New Hampshire Association of Medical Staff Services.

Laura Stephenson Carter, associate editor of *DARTMOUTH MEDICINE* magazine, was chosen as a fellow by the New York Times Company Foundation's Institute for Journalists, to attend a conference titled “Cells and Souls: The Science, Politics, and Ethics of Embryonic Stem Cell Research.” See page 2 for details.

The **DMS-DHMC Office of Development Communications** received two awards in the Association of American Medical Colleges' Awards for Excellence competition. The Transforming Medicine Campaign materials received the highest award in the Premier Performance category, and an interactive campaign CD earned highest honors in the Electronic Communications category. See page 51 for details.

Dartmouth Medical School was once again ranked by *U.S. News & World Report* among the nation's top medical schools. Dartmouth was 32nd on a scale emphasizing research, and 18th on a scale emphasizing primary care.

DMS's **Family Medicine Interest Group** received the American Academy of Family Physicians 2006-07 Program of Excellence Award.

Dartmouth-Hitchcock Medical Center was selected for inclusion in Hospitals for a Healthy Environment's new Environmental Leadership Circle, for its continuous and sustainable efforts in environmental health. See page 26 for more on this subject. ■