Medical Makeover

A new master’s program and expansion of the M.D./Ph.D. program are two among many changes to emerge from the Harvard Medical School (HMS) strategic-planning process, which Dean Jeffrey S. Flier began last fall soon after taking office.

From the dozen reports produced and suggestions generated with the participation of more than 100 faculty members, retooling educational offerings emerged as a top priority. The one-year master’s program—leading to a master of medical science degree (M.M.Sc.)—debuts this fall on a pilot basis as an extra-year option for first-year medical students and rising second-year students. Nearly half of Harvard medical students already extend their education by a year to pursue a special interest or project, Flier notes, “but it tends not to be particularly organized.”

The program, with its formal structure and thesis requirement, goes hand in hand with a new mandate that all M.D. candidates—starting with the class that enters in 2010—complete a scholarly project. This change reflects the idea that Harvard and its students should regard advancing medicine, and not just professional training, as a critical goal. Students will have almost complete freedom of choice, but projects are expected to fall into three broad areas: basic biomedical research; clinical and translational research; and medicine and society (encompassing health policy, global health, and the history of medicine, among other things). “Some students may elect to pursue only the minimum four-month scholarly project requirement by writing up their work from a summer service-learning project,” members of the education review committee wrote; for others, the projects will kindle a flame that grows into a master’s thesis (see above) or a lifelong research interest.

Another of the review committee’s recommendations, expanding the M.D./Ph.D. program, was a no-brainer, says Flier: “We could easily double the size and not have any fall-off in the quality of the students.” The program admits 10 or 11 students a year; other qualified applicants are admitted to the M.D.-only program, but usually choose to go elsewhere. Federal funding covers the costs for current students, but admitting more (at the University’s own expense) will be costly, as will the master’s program. Flier says, hopefully, “We think this will get a lot of people’s attention from a philanthropic point of view.”

New entities whose missions cross disciplinary lines, but align closely with parts of HMS, are suddenly rife at the University—for instance, the Broad Institute of Harvard and MIT, created in 2003 to develop tools for genomics-based medicine, and the Harvard Stem Cell Institute, created in 2004. On the nascent Allston campus, opportunities for interfaculty collaboration are bound only to increase, but with those opportunities comes the responsibility to plan well for how, and where, such collaborations should take place. With undergraduates clamoring for courses in global health and bioengineering, and medical students hoping to capitalize on resources elsewhere at the University, Flier decided it was time to appoint a dean with a particular focus on matters interdisciplinary. Effective June 16, Thomas Michel, a cardiologist and professor of medicine who headed the strategic review committee on education, assumed the new position of dean for education. (Walter professor of medicine Jules Dienstag will remain dean for medical education.)

Other faculty working groups considered topics including global health; microbial sciences; neuroscience; aging; bioengineering; medical imaging; pharmacology; organizational structures; tools and technology; human genetics; immunology and inflammation; and the social sciences. The reports are all available at http://hms.harvard.edu/public/strategy; together, they constitute a wish list long enough to fill the duration of a deanship and beyond. Flier is still prioritizing, but he vows swift action, in some format, on bioengineering (see page 59), pharmaceutical development, and global health—and he predicts a major announcement this fall in the area of human genetics, a field where, he says, “We have many of the leaders, internationally, at Harvard. They just haven’t been organized in a way that takes full advantage.”

Doing Community Medicine

A few years ago, instructor of medicine Pieter Cohen, a primary care physician at the Harvard-affiliated Cambridge Health Alliance (CHA), began noticing a strange pattern of symptoms among some of his Brazilian immigrant patients. A number of young women complained of anxiety, heart palpitations, sleep problems, and nausea, and some showed signs of abnormal thyroid. Cohen suspected that their conditions might be connected, but he had no leads on a cause.

The breakthrough came during a session with a 26-year-old female patient who had made several trips to the emergency room for chest pains and dizziness. A full battery of hospital tests had revealed no abnormalities, but during her visit with Cohen, she showed him a bottle of prescription diet pills from Brazil. She hadn’t mentioned the pills during any previous medical check-ups. Cohen, who speaks and reads Portuguese, saw that the tablets contained at least eight different medications—including antidepressants, benzodiazepines (tranquilizers), diuretics, laxatives, and a widely banned amphetamine called Fenproporex—none of them recommended for weight loss under accepted medical guidelines. Lab tests on the pills confirmed that the mix of prescription ingredients causes potentially hazardous side effects consistent with what Cohen had been seeing in his patients. Once the women stopped taking the drugs, their symptoms abated.

The discovery set Cohen on an investigative journey. With support from fellow clinicians and community-health officials, he surveyed 300 women (in one
primary-care physician Daniel McCormick combines family medicine with "a passion for social justice."
funds coming from federal and state sources, including Medicare, Medicaid, Medicaid Managed Care, Commonwealth Care, and the state’s Health Safety Net Trust Fund (formerly the “free care pool”). Despite continuing financial uncertainties, the system continues to provide a major safety net of services—not only physicians and nurses, but social workers, mental-health providers, and cultural interpreters—to large numbers of uninsured and under-insured patients who would otherwise have to rely on emergency-room care.

Since its founding, Cambridge Hospital, now CHA, has attracted a distinct breed of doctors: those who tend to be less interested in high-paying, medical-specialty career paths than in the chance to improve the well-being of those at the bottom of the healthcare ladder. Daniel McCormick joined CHA as a full-time faculty member in 1997, eager to combine his interest in family medicine with “a passion for social justice.” In his primary-care practice in Somerville, he treats a steady stream of low-income patients, many of them immigrants from Haiti, Brazil and elsewhere in Latin America, and the Middle East. With help from on-site interpreters employed by CHA, he takes time to discuss patients’ family situations, working conditions, and daily habits—recognizing that much of the optimal care of patients takes place outside the doctor’s office. “Sometimes there’s economic stress or a mental-health condition that keeps patients from complying with a drug regimen or following up on appointments,” he explains. “Other times it can be a matter of cultural resistance.” If a test or treatment sounds frightening, some patients opt for home remedies instead. McCormick works closely with patients’ family members (many of whom are also his patients), and with social workers, to address the life issues that may be impeding treatment.

In lectures and in the clinic, McCormick and his colleagues impart this “big picture” approach to students. “Those who choose to train here know that they are going to gain exposure to a patient population and a teaching philosophy that differs from other hospitals in the Harvard system,” explains Davidson.
associate professor of medicine David Bor, who heads the department of medicine at Cambridge Hospital.

Under new curriculum guidelines, all HMS students receive some instruction in the “social context of medicine”—in topics such as health policy, clinical epidemiology, and medical ethics—and in “patient-centered” care. (The new “integrated clerkship,” for instance, allows third-year students to follow an individual patient over a period of months; see “The Pulse of a New Medical Curriculum”, September-October 2006, page 64). But at CHA, these themes permeate all levels of training and are geared in particular toward the challenges of treating underserved and “socially complex” patients: the very poor, the homeless, recent immigrants, political refugees, those with substance-abuse disorders, and those with a history of incarceration. “This focus doesn’t replace the teaching of traditional clinical medicine,” McCormick explains. “Rather, it allows the medicine we teach to be effective in the real world.”

Fourth-year HMS student Jane Lowe was grateful to land a spot at CHA for her second-year “Doctor-Patient” training. “Cambridge is always oversubscribed, because of the unique population it serves,” she says. Before entering medical school, Lowe spent summers working as a patient interviewer at Grady Memorial Hospital, a public safety-net facility in Atlanta. The Cambridge assignment offered her the chance to pursue her interest in healthcare disparities and in “the social aspects, rather than just the scientific aspects, of medicine,” she says. “I learned things that I couldn’t learn elsewhere, like how to achieve medication compliance in homeless patients, how to work with interpreters, and how to interview and examine patients from other countries who may have had traumatic experiences.”

The staff’s approach to medical care also sets the system apart, Lowe adds. “The doctors are uniquely engaged in their patients’ lives. They go way beyond the clinical complaint that may have brought the patient to the hospital, taking time to find the right interpreter, referring patients for substance-abuse treatment, and fol-

Yesterday’s News

From the pages of the Harvard Alumni Bulletin and Harvard Magazine

1928 The University plans to give a total of $350,000 in financial aid to its students, enough to pay the tuition of the entire previous year’s College class.

1933 After two months on the job, President James B. Conant discontinues the 7 o’clock rising bell in Harvard Yard, ending a tradition that has long outraged sleepy freshmen. (In the earliest days of the College, the bell was rung at 5 a.m.)

1943 On September 6, in a ceremony whose guest is kept secret until the day before, Harvard awards an honorary degree to Winston Churchill. The chance to hear “the man whose character and eloquence have been the inspiration of the free world in its darkest hour” leads many professors to curtail vacations and many families to cancel Labor Day plans.

1948 Responding to queries about a military draft, President Conant suggests that the country “apply the principle of universal liability or obligation to everyone at 18 years of age or on graduation from high school.”


1978 Radcliffe College celebrates its centennial on September 15 and 16. * * *

For the first time in nine years, undergraduates elect representatives to a College-wide assembly, and the class of ‘82 forms two political groups. The Hedonist Party rallies around a platform of “constant physical contact between genders, oral surgery for Jimmy Carter, total use of beer, wine, Thai sticks, ganja cigarettes, Quaaludes, THC, and LSD as the bill of rights.” The Mongol Party campaigns for the ideals of “rape, pillage, plunder, and rape.” The dean of freshmen calls the Mongol agenda “moderate and sensible.”

1983 The Harvard-Radcliffe Orchestra, the University’s oldest music group, is invited to play in Russia—a first for any Harvard organization.
Edward C. Forst ’82 has been named Harvard’s first executive vice president, effective September 1. As the “principal ranking operating officer” at the University, he will oversee financial, administrative, and human-resources functions (each run by a vice president) and administrative information technology. The new position relieves somewhat the administrative pressures on the president and provost, to whom seven vice presidents and 11 deans, among others, now report. Forst, a Goldman Sachs partner since 1998, was most recently global head of investment management (and now becomes a board member at Harvard Management Company, which invests the endowment); previously, he served as chief administrative officer at Goldman Sachs. He has been actively involved in his College class’s reunions and gift committee.

Conant professor of education Judith D. Singer, former academic dean and acting dean at the Harvard Graduate School of Education, has been appointed the University’s senior vice provost for faculty development and diversity. In that role, Singer, known for developing quantitative methods of social-science research, will oversee and monitor faculty-appointment processes; review junior-faculty appointments; administer University funds used to appoint scholars who make the faculty more diverse; and gather data and report on the status of these efforts (see www.faculty.harvard.edu). She succeeds Evelyn Hammonds, who became dean of Harvard College in June.

Communications Chief Christine Heenan, founder and president of Clarendon Group, a Providence, Rhode Island-based public and government relations firm, will become Harvard’s new vice president for government, community, and public affairs, effective October 1. She succeeds Alan J. Stone.

Heenan, who holds a B.S. in journalism from Boston University, was a business strategy consultant. She then entered government, serving on the Domestic Policy Council staff during the first term of the Clinton administration, focusing on health and women’s issues and writing speeches. She had communications roles at the 1996 and 2000 Democratic national conventions, and was subsequently director of community and government relations at Brown University and Brown Medical School. She founded Clarendon Group in 2000. Her Harvard portfolio extends from Boston’s review of Allston plans and congressional concern over university endowments to news-media matters.

This level of patient involvement provides the basis for CHA’s brand of academic activism. As director of the alliance’s division of healthcare policy and research, McCormick is part of a working group of CHA internists and psychiatrists committed to investigating and publicizing a range of inequalities in the country’s healthcare system. Many of the group’s papers have been widely publicized and have helped shape health-policy debates. A 2007 study led by associate professors of medicine Stephanie Woolhandler and David Himmelstein, for example, revealed the rising numbers of uninsured veterans in the United States and led to Woolhandler’s testifying before Congress on the issue.

A simple clinical observation prompted the study. “We noticed that a lot of uninsured vets were showing up at our clinic,” McCormick explains, “so we decided to look at the actual data.” The numbers were astounding: 1.8 million non-elderly veterans were uninsured in 2004—an increase of 290,000 since 2000. The researchers found that most uninsured veterans have middle-class incomes that disqualify them for Veterans Administration (VA) care, while others can’t afford the co-payments or don’t have access to VA facilities in their communities. (The CHA group has produced similarly high-impact studies addressing the steep rise in emergency-room wait times, the distribution of free drug samples to affluent rather than needy patients, and the lack of knowledge among U.S. medical students about military medical ethics; see www.challiance.org/news/news.shtml).

“Plenty of other places conduct research on these kinds of public-health issues,” McCormick says. “The difference is that we don’t stop at getting our studies into peer-reviewed journals. We get on the phone, start talking to reporters, hold press conferences, and write editorials. Our view is: What’s the point of doing research if you’re not going to do anything with it?” McCormick himself teaches an annual month-long seminar to medical students on evidence-based healthcare advocacy, providing some background in biostatistics and epidemiology and requiring students to design a research study addressing a current medical-care problem. Jane Lowe focused on the shortage of primary-care physicians in Massachusetts: “The elective taught me the concrete steps to take,” she explains, “from recognizing a problem, to collecting data, to formulating solutions, and then reaching the audience that can make a difference in healthcare policy.”

At a time when community-focused, public hospitals are in short supply (there are 300 fewer today than 15 years ago), CHA provides a valuable training ground for HMS students. “Municipal hospitals
Environmental Action

The university will cut its greenhouse-gas emissions by 30 percent during the next eight years, President Drew Faust vowed in a July 8 announcement.

Harvard had already committed to ambitious environmental goals for the new Allston campus (see “Growing Green,” November-December 2007, page 28E), but this was the first University-wide greenhouse-gas emissions pledge. In making it, Faust endorsed the recommendations of a task force (chaired by Brooks professor of international science, public policy, and human development William C. Clark) that she appointed in February to consider the issue. Using the University’s 2006 emissions—282,000 metric tons of carbon dioxide equivalent (MTCDE)—as a baseline, a 30 percent reduction would mean bringing emissions below 200,000 MTCDEs by 2016, even as Harvard expands significantly in size.

By some judgments, even this goal falls far short: the Canadian province of British Columbia is requiring publicly funded colleges there to be carbon neutral—with zero net emissions—by 2010. But even a 30 percent reduction, Faust said, will require “extraordinary efforts”—and conservation won’t suffice on its own. The task force concluded that the University will also need to invest in “high-quality carbon offsets” to achieve its goal. Given the difficulty of ascertaining offsets’ legitimacy and reliability in the current market, the authors said, Harvard would be wise to look into creating its own—by investing in a wind farm, to give one example. This, Faust said, is where the University might make its greatest contribution to combating climate change.

Harvard is already trying many green initiatives; it will need to do much more to meet its new greenhouse-gas emissions goal. Above: washing a car with rainwater that was recycled rather than lost as runoff. Top right: solar panels on the roof of the Business School’s Shad Hall. Right: recycling cardboard at the dining hall that serves Dunster and Mather Houses.

But conservation is the initiative’s cornerstone nonetheless. “We can do all the renewable-energy production we want, but if we are wasting the energy we’re using, we’re actually not solving the problem at all,” says Thomas E. Vautin, the University’s associate vice president for facilities and environmental services, and vice chair of the greenhouse-gases task force. Because Harvard’s properties vary so widely in their energy needs and conservation options, the first step will be a building-by-building energy audit. Still, a few types of solutions are likely to apply to many buildings, and go far to conserve energy. These include making lighting- and tem-

Go to harvardmagazine.com/extras to view a slide show of ecophilic initiatives in the Faculty of Arts and Sciences and to see the winning entries in the Harvard Green Campus Initiative cartoon contest.

---

Go to harvardmagazine.com/extras to view a slide show of ecophilic initiatives in the Faculty of Arts and Sciences and to see the winning entries in the Harvard Green Campus Initiative cartoon contest.

Ashley Pettus