The Atlantic

The Triumph of New-Age Medicine

MEDICINE HAS LONG DECRIED ACUPUNCTURE, HOMEOPATHY, AND THE LIKE AS DANGEROUS NONSENSE THAT PREYS ON THE GULLIBLE. AGAIN AND AGAIN, CAREFULLY CONTROLLED STUDIES HAVE SHOWN ALTERNATIVE MEDICINE TO WORK NO BETTER THAN A PLACEBO. BUT NOW MANY DOCTORS ADMIT THAT ALTERNATIVE MEDICINE OFTEN SEEMS TO DO A BETTER JOB OF MAKING PATIENTS WELL, AND AT A MUCH LOWER COST, THAN MAINSTREAM CARE—AND THEY'RE TRYING TO LEARN FROM IT.

By David H. Freedman

I MEET BRIAN BERMAN, a physician of gentle and upbeat demeanor, outside the stately Greek columns that form the facade of one of the nation's oldest medical-lecture halls, at the edge of the University of Maryland Medical Center in downtown Baltimore. The research center that Berman directs sits next door, in a much smaller, plainer, but still venerable-looking two-story brick building. A staff of 33 works there, including several physician-researchers and practitioner-researchers, funded in part by $35 million in grants over the past 14 years from the National Institutes of Health, which has named the clinic a Research Center of Excellence. In addition to conducting research, the center provides medical care. Indeed, some patients wait as long as two months to begin treatment there—referrals from physicians all across the medical center have grown beyond the staff's capacity. "That's a big change," says Berman, laughing. "We used to have trouble getting any physicians here to take us seriously."

Also see:

The Center for Integrative Medicine, Berman's clinic, is focused on alternative medicine, sometimes known as "complementary" or "holistic" medicine. There's no official list of what alternative medicine actually comprises, but treatments falling under the umbrella typically include acupuncture, homeopathy (the administration of a glass of water supposedly containing the undetectable remnants of various semi-toxic substances), chiropractic, herbal medicine, Reiki ("laying on of hands," or "energy therapy"), meditation (now often called "mindfulness"), massage, aromatherapy, hypnosis, Ayurveda

(a traditional medical practice originating in India), and several other treatments not normally prescribed by mainstream doctors. The term *integrative medicine* refers to the conjunction of these practices with mainstream medical care.

Berman's clinic is hardly unique. In recent years, integrative medical-research clinics have been springing up all around the country, 42 of them at major academic medical institutions including Harvard, Yale, Duke, the University of California at San Francisco, and the Mayo Clinic. Most appear to be backed enthusiastically by administrators and many physicians. "Doctors tend to end up trained in silos of specialization," says Jay Perman, president of the University of Maryland at Baltimore and a practicing pediatrician. "We're taught to make a diagnosis, prescribe a therapy, and we're done. But we're not done. The patient's environment matters. When it comes to alternative medicine, it's not clear what the mechanism is that can make it helpful to patients, but it may be that it helps create the right environment."

At one of the University of Maryland Medical Center's hospitals, I introduced myself to Frank Corasaniti, a 60-year-old retired firefighter who had come in for an acupuncture treatment from Lixing Lao, a Ph.D. physiologist with Berman's center. Corasaniti had injured his back falling down a steel staircase at a firehouse some 20 years earlier, and had subsequently injured both shoulders and his neck in the line of duty. Four surgeries, including one that fused the vertebrae in his neck, followed by regimens of steroid injections and painkillers, had only left him in increasing pain. He retired from the fire department in 2002 and took a less physically demanding job with Home Depot, but by last year his sharpening pain made even that work too difficult, and he gave it up. "I was starting to think I'd have to stop doing everything," he told me. He was particularly worried that he'd be unable to continue helping out his mother, who had been battling cancer for two years.

His wife, a nurse, urged him to try acupuncture, and in February, with the blessing of his doctor, he finally met with Lao, who had trained in his native China as an acupuncturist. Their first visit had lasted well over an hour, Corasaniti says, time mostly spent discussing every aspect of his injuries and what seemed to ease or exacerbate them, and also other aspects of his health—he had been gaining weight, he was constipated, he was developing urinary problems. They talked at length about his diet, his physical activity, his responsibilities and how they weighed on him. Lao focused in on stress—what was causing it in Corasaniti's life, and how did it aggravate the pain?—and they discussed the importance of finding ways to relax in everyday life.

Then Lao had explained how acupuncture would open blocked "energy pathways" in his body, allowing a more normal flow of energy that would lessen his pain and help restore general health. While soothing music played, Lao placed needles in and around the areas where Corasaniti felt pain, and also in his hands and legs, explaining that the energy pathways affecting him ran throughout his body. The needle emplacement itself took only about three minutes. Lao then asked Corasaniti to lie quietly for a while, and Corasaniti promptly fell asleep, awakening about 20 minutes later when Lao gently roused him. Corasaniti continued to come in for 40-minute sessions twice a week for six weeks, and since then had been coming in once a week.

Though of course alternative-medicine experiences can vary widely, certain aspects of Corasaniti's visit

are typical. These include a long initial meeting covering many details of the patient's history; a calming atmosphere; an extensive discussion of how to improve diet and exercise; a strong focus on reducing everyday stress; an explanation of how the treatment will unleash the body's ability to heal itself; assurance that over time the treatment will help both the problem that prompted the visit and also general health; gentle physical contact; and the establishment of frequent follow-up visits.

Corasaniti's description of the results is fairly typical too. After two months of treatment, the worst area of pain, near his neck, had shrunk from a circle six inches across to the size of quarter, he said. He'd lost 10 pounds, and his constipation and urinary difficulties had cleared up. And because of his progress, he'd been cleared by his doctor to start a vigorous monitored-exercise program aimed at strengthening muscles in a way that should reduce the chances of reinjury, in addition to improving his general fitness. "I just feel so much better," he said.

"IT'S CLEVERLY MARKETED, dangerous quackery," says Steven Salzberg, a prominent biology researcher at the University of Maryland at College Park, an easy commuter-rail ride from the medical center. "These clinics throw together a little homeopathy, a little meditation, a little voodoo, and then they add in a little accepted medicine and call it integrative medicine, so there's less criticism. There's only one type of medicine, and that's medicine whose treatments have been proven to work. When something works, it's not all that hard to prove it. These people have been trying to prove their alternative treatments work for years, and they can't do it. But they won't admit it and move on. Of course they won't. They're making too much money on it."

On his well-read blog and elsewhere, Salzberg has established himself as an expert on research studies related to alternative medicine—and as one of the angriest voices attacking the field. In particular, he calls for an end to government funding of clinics like Berman's. He says the funding is in no way based on any genuine belief among scientists that alternative medicine merits further study. Rather, it is propelled by a handful of members of Congress—most notably Tom Harkin of Iowa, the chair of the Senate subcommittee that oversees NIH funding—who are determined to see their own misplaced faith in alternative medicine validated. (Harkin's office declined to make him available for an interview.)

Medical centers are lining up to establish research clinics so that they can take NIH funding for alternative-medicine studies, Salzberg adds. Aggressive marketing of these clinics can also generate substantial patient demand (even a small integrative clinic can take in several million dollars a year). The anecdotal testimony these patients offer merely reflects their gullibility and self-selection into alternative care; subjective symptoms like pain and discomfort, he notes, are susceptible to the power of suggestion. These same symptoms also tend to be cyclical, meaning that people who see a practitioner when their symptoms flare up are likely to see the symptoms moderate, no matter what the practitioner does or doesn't do. Patients simply misattribute the improvement to the treatment.

Alternative medicine wouldn't be quite so bad if it were harmless, Salzberg says, but it isn't. "If the treatment is herbal tea or yoga, fine; it won't help, but at least it won't hurt you," he says. "But acupuncture carries a real risk of infection from needles. And when a chiropractor cracks your neck, there's a small but nontrivial chance that he can shear an artery in your neck, and you'll die." (A *British Medical Journal* study last year found that only 200 cases of likely acupuncture-related infection have

been reported globally, but that many more may have occurred. Evidence for a tiny risk of chiropractic artery-shearing and related stroke is scant, indirect, and contested, but seems plausible.) The biggest danger of all, Salzberg adds, is that patients who see alternative practitioners will stop getting mainstream care altogether. “The more time they spend getting fraudulent treatments, the less time they’ll spend getting treatments that work and that could save their lives.”

It’s not hard to see alternative medicine as a dubious business, or even, in some part, a scam, if one includes all the supplements, devices, and patently absurd therapies that are hawked in magazines and infomercials and at strip malls. Anyone can make vague health claims for almost any reasonably safe product or practice with the appropriate fine print—“The U.S. Food and Drug Administration has neither evaluated nor approved the claims for this product,” for instance. And so the public snatches up millions of hologrammed silicone bracelets that promise to revitalize the fatigued.

Most homeopaths, acupuncturists, and herbalists don’t have an M.D. and don’t work under the close supervision of a physician, so they are free to make exaggerated claims or offer ungrounded advice. It’s difficult to get too worked up about teenagers dropping 20 bucks on a hip but medically useless bracelet, but we should all feel uncomfortable hearing about young children with autism being pulled out of behavioral therapy and placed into herbal or spinal-manipulation treatment. About 40 percent of Americans have tried some form of alternative medicine at some point, and some $35 billion a year is spent on it. A certain amount of abuse seems like a given.

Concerns of outright malpractice or naked hucksterism seem grossly misplaced when applied to a clinic like Berman’s. Nonetheless, says Salzberg, the bottom line is that studies clearly show alternative medicine simply doesn’t work. And at first glance, that contention seems nearly incontrovertible. The scientific literature is replete with careful studies that show, again and again, that virtually all of the core treatments plied by alternative practitioners, including homeopathy, acupuncture, chiropractic, and others, help patients no more than do “sham” treatments designed to fool patients into thinking they’re getting the treatment when they’re really not. (Even acupuncture can be faked, by tapping the skin in random places with a metal tube; reliably, these taps produce treatment results identical to those of the needles themselves.) “Acupuncture is just a 3,000-year-old relative of bloodletting,” Salzberg told me.

YOU MIGHT THINK the weight of the clinical evidence would close the case on alternative medicine, at least in the eyes of mainstream physicians and scientists who aren’t in a position to make a buck on it. Yet many extremely well-credentialed scientists and physicians with no skin in the game take issue with the black-and-white view espoused by Salzberg and other critics. And on balance, the medical community seems to be growing more open to alternative medicine’s possibilities, not less.

That’s in large part because mainstream medicine itself is failing. “Modern medicine was formed around successes in fighting infectious disease,” says Elizabeth Blackburn, a biologist at the University of California at San Francisco and a Nobel laureate. “Infectious agents were the big sources of disease and mortality, up until the last century. We could find out what the agent was in a sick patient and attack the agent medically.” To a large degree, the medical infrastructure we have today was designed with infectious agents in mind. Physician training and practices, hospitals, the pharmaceutical

industry, and health insurance all were built around the model of running tests on sick patients to determine which drug or surgical procedure would best deal with some discrete offending agent. The system works very well for that original purpose, against even the most challenging of these agents—as the taming of the AIDS virus attests.

But medicine's triumph over infectious disease brought to the fore the so-called chronic, complex diseases—heart disease, cancer, diabetes, Alzheimer's, and other illnesses without a clear causal agent. Now that we live longer, these typically late-developing diseases have become by far our biggest killers. Heart disease, prostate cancer, breast cancer, diabetes, obesity, and other chronic diseases now account for three-quarters of our health-care spending. "We face an entirely different set of big medical challenges today," says Blackburn. "But we haven't rethought the way we fight illness." That is, the medical establishment still waits for us to develop some sign of one of these illnesses, then seeks to treat us with drugs and surgery.

Unfortunately, the drugs we've thrown at these complex illnesses are by and large inadequate or worse, as has been thoroughly documented in the medical literature. The list of much-hyped and in some cases heavily prescribed drugs that have failed to do much to combat complex diseases, while presenting a real risk of horrific side effects, is a long one, including Avastin for cancer (blood clots, heart failure, and bowel perforation), Avandia for diabetes (heart attacks), and torcetrapib for heart disease (death). In many cases, the drugs used to treat the most-serious cancers add mere months to patients' lives, often at significant cost to quality of life. No drug has proved safe and effective against Alzheimer's, nor in combating obesity, which significantly raises the risk of all complex diseases. Even cholesterol-lowering statins, which once seemed one of the few nearly unqualified successes against complex disease, are now regarded as of questionable benefit in lowering the risk of a first heart attack, the use for which they are most widely prescribed. Surgery, widely enlisted against heart disease, is proving nearly as disappointing. Recent studies have shown heart-bypass surgery and the emplacement of stents to prop open arteries to be of surprisingly little help in extending the lives of most patients.

It doesn't help that some of these treatments are foisted on people who don't need them. According to one study, a person who shows up at an emergency room complaining of chest pain has about an 80 percent chance of being admitted and subjected to a series of sophisticated tests, even when the patient is not at high risk for heart disease and thus has an almost negligible chance of actually being ill if a few routine tests don't turn up any irregularities. The longer round of tests carries a significant chance of falsely indicating that a key artery is clogged, and sometimes leads to the utterly unnecessary surgical insertion of a stent, accompanied by a long-term drug regimen to fight off the real risk of clotting in that stent. In this way, many healthy people each year are converted into long-term patients.

All of these shortcomings add up to a grim reality: as a prominent 2000 study showed, America spends vastly more on health as a percentage of gross domestic product than every other country—40 percent more than France, the fourth-biggest payer. Yet while France was ranked No. 1 in health-care effectiveness and other major measures, the United States ranked 37th, near the bottom of all industrialized countries.

THE MEDICAL COMMUNITY knows perfectly well what sort of patient-care model would work better against complex diseases than the infectious-disease-inspired approach we've inherited. That would be one that doesn't wait for diseases to take firm hold and then vainly try to manage them with drugs, but that rather focuses on lowering the risk that these diseases will take hold in the first place. "We need to prevent and slow the onset of these diseases," says Blackburn. "And we know there are ways to do that." Aside from getting people to stop smoking, the three most effective ways, according to almost any doctor you'd care to speak with, are the promotion of a healthy diet, encouragement of more exercise, and measures to reduce stress.

The evidence that these lifestyle and attitude changes have enormous impact on health is now overwhelming. Dean Ornish, a physician-researcher at the University of California at San Francisco and the founder of the independent Preventive Medicine Research Institute, has been showing in studies for more than three decades that diet, exercise, and stress reduction can do a better job of preventing, slowing, and even reversing heart disease than most drugs and surgical procedures. "They used to say I was crazy," he told me. "Now studies have shown that angioplasty and stents don't prolong life in patients with heart disease. And studies have shown that lifestyle changes work better than drugs in preventing the complications of diabetes." A major 2004 study that followed 30,000 people concluded that lifestyle change could prevent 90 percent or more of all cases of heart disease.

Relieving patient stress, in particular, is looking more and more important, according to Blackburn. She earned her Nobel for her work on telomeres—the ends of the strands of DNA that make up our chromosomes. Studies by her and others have shown that stress is linked to the shortening of telomeres, and shorter telomeres are in turn linked to aging and cancer. "We tend to forget how powerful an organ the brain is in our biology," Blackburn told me. "It's the big controller. We're seeing that the brain pokes its nose into a lot of the processes involved in these chronic diseases. It's not that you can wish these diseases away, but it seems we can prevent and slow their onset with stress management." Numerous studies have found that stress impairs the immune system, and a recent study found that relieving stress even seems to be linked to slowing the progression of cancer in some patients.

Medicine has long known what gets patients to make the lifestyle changes that appear to be so crucial for lowering the risk of serious disease: lavishing attention on them. That means longer, more frequent visits; more focus on what's going on in their lives; more effort spent easing anxieties, instilling healthy attitudes, and getting patients to take responsibility for their well-being; and concerted attempts to provide hope. Studies have shown that when a doctor speaks to a patient about quitting smoking or losing weight, the patient is more likely to do it. A 2008 study on physician-patient relationships found that physicians deemed "exemplars" based on their reputation and awards received were likely to create an emotional bond with patients; to convey to patients that their commitment to caring for them will endure over time; and to imbue patients with "trust, hope, and a sense of being known." Hippocrates put it this way: "It is more important to know what sort of person has a disease than to know what sort of disease a person has."

This "healing" approach to patient care clearly isn't found in the typical visit to the doctor's office.

Studies show that visits average about 20 minutes, that doctors change the subject back to technical talk when patients mention their emotions, that they interrupt patients' initial statements after 23 seconds on average, that they spend a single minute providing information, and that they bring up weight issues with fewer than half their overweight patients.

Many medical students start out with a healer mentality, but few retain it. "It gets beaten out of you by the system," says Brian Berman, noting a study showing that medical students score progressively lower on empathy tests the further they get into their training. Berman himself was a conventional M.D. until, at age 33, he took up the study of traditional Chinese medicine—which, like many alternative approaches, is largely focused on patients' lifestyles, feelings, and attitudes, and which emphasizes stress reduction, healthier eating, and regular exercise, as well as encouraging the patient to believe in self-healing. "I saw how much more I could do to help people," he says. "For the first time since medical school, I felt like a healer again."

The benefits of a healing approach extend beyond the prevention of major chronic diseases to the management of many everyday maladies that plague millions of people. Amit Sood, a physician at the Mayo Clinic in Rochester, Minnesota, came to the United States from his native India to practice medicine in 1995, and he told me he was shocked at what he found. "I thought America would be a Disneyland of health," he said. "And what I saw was patient after patient who seemed wealthy, who tested healthy, and who was completely miserable." Aches and pains, fatigue, anxieties, lack of mobility, digestive ills—all of these problems are extremely common, and all can greatly diminish quality of life. Yet they are seldom easily diagnosable in the conventional sense—a single, identifiable pathogen is rarely responsible—and drugs and surgery can be clumsy tools for dealing with them.

Typical of people who complain of hard-to-pin-down ailments is Mary Pinkard, another patient I met at the University of Maryland Medical Center. A petite, young-looking 54-year-old, Pinkard told me about her long history of extreme fatigue, sinus discomfort, and other symptoms, which under the care of conventional physicians had resulted in three operations on her sinuses and a hysterectomy, as well as long, intense courses of antibiotics—none of it very helpful. "In 30 years, I didn't have three months in a row of good health," she said. She had recently started seeing Dr. Lauren Richter, an osteopath with Berman's clinic trained in acupuncture and other alternative approaches, and told me the improvements had been dramatic. She hadn't been sick in five months, she said, and hadn't had to take any drugs. She declared well worth it the $2,500 she'd had to pay, out of pocket, for her treatment.

The Mayo Clinic's Sood, after seeing how dissatisfied American patients were with their costly, state-of-the-art health care, reacquainted himself with the traditional medicine of his childhood, and now runs a stress-reduction program loosely based on meditation techniques. "Awareness and stress management are key to resilience and the ability to self-regulate health," he says. Many of the large companies that contract with the Mayo Clinic to provide executive-wellness programs have been so taken with Sood's program that they've asked him—to no avail—to be accessible to them through the clinic full-time.

STEVEN NOVELLA CALLS the notion that alternative care's benefits are rooted in closer practitioner-patient interactions the "touchy-feely defense." Novella is a highly respected Yale neurologist, and the

editor of Science-Based Medicine, an influential blog that has tirelessly gone after alternative medicine. I met with him in his home outside New Haven, Connecticut, where he argued that claims about the practitioner-patient relationship are only intended to draw attention away from the fact that randomized trials have by and large failed to show that alternative treatments work better than placebos. And while he concedes that sham treatments can give patients a more positive attitude, which can confer real health benefits, he is adamant that providing sham treatments at all—essentially fooling patients into believing they're being helped—is highly unethical. "Alternative practitioners have a big advantage," says Novella. "They can lie to patients. I can't."

Yet on its own terms, this argument is not as cut-and-dried as it first appears. "Mainstream medicine uses the placebo effect all the time," says Ted Kaptchuk, a Harvard researcher who studies the impact of placebos. "Doctors don't tell you the drug they're giving you is barely better than a placebo. They all spin." To be approved by the FDA, a drug has to do better than a placebo in studies—but most approved drugs do only a little better, and for many drugs the evidence is mixed. A number of studies have indicated, for example, that most antidepressants don't do better than placebos, but patients filled more than 250 million prescriptions for them in 2010. The vast majority of drugs don't work in as many as 70 percent of patients, according to an estimate from within the pharmaceutical industry. One recent study concluded that 85 percent of new prescription drugs hitting the market are of little or no benefit to patients.

Of course, whether doctors or alternative practitioners are really "lying" when they ply patients with drugs or homeopathic remedies is a matter of judgment—we can't know how much any individual caregiver believes in these treatments, although a noteworthy 2008 survey found that about half of U.S. physicians admit they routinely prescribe treatments they don't think are likely to be of direct physical benefit. Regardless, notes Kaptchuk, patients absolutely end up feeling better, and often testing healthier, when they get these noneffective treatments, thanks to the placebo effect. "Knowing that you're getting a treatment," he says, "is a critical part of the ritual of seeing any kind of practitioner."

Many studies have proved that sham-treatment rituals can do as well as drugs and surgery in relieving symptoms of many common and debilitating ailments. A 2002 study found that sham knee surgery involving an incision but nothing else did as much to relieve arthritis as the standard real procedure, and a 2009 study found that the same was true of a common back operation for osteoporosis. A 2008 *British Medical Journal* study by Kaptchuk and several colleagues showed that patients receiving sham treatment for irritable bowel syndrome—which is one of the 10 disorders that most frequently bring patients to doctors and which has been estimated to cost the U.S. up to $30 billion a year—did as well as patients typically do on the standard drug for the disorder. A 2001 study showed that in patients suffering from Parkinson's disease, a condition marked by the brain's diminished ability to produce dopamine, a placebo treatment caused dopamine production to surge. A German Medical Association study this year found that 59 percent of patients with stomach discomfort were helped by sham treatments.

"Placebos have a stronger impact and are more complex than we realized," German Medical

Association Director Christoph Fuchs stated upon the study's release. "They are hugely important in medicine today." Studies by Kaptchuk and others have even shown that patients still get a beneficial placebo effect when practitioners are honest but optimistic with patients about the placebo—saying something along the lines of "We know of no reason why this should work, yet it seems to work with many patients." Sure enough, it often does.

Studies have also shown that alternative treatments such as acupuncture tend to produce a larger placebo effect than merely handing out sugar pills, presumably because alternative treatments involve more ritual, and thus further raise patients' expectations. In other words, alternative practitioners tend to do a better job at "selling" the placebo effect.

One might argue that a system of care that merely delivers a powerful, relatively safe placebo for many conditions—without side effects—has at least something to commend it, when compared with the system of care we actually have today. Yet to focus on alternative medicine's placebo effect ignores what may be its largest benefit—its adherence to a "healing" model of patient care.

Randomized controlled trials, the medical world's gold standard for assessing the efficacy of treatments, cannot really test for this effect. Such studies are perfect for testing pills and other physically administered treatments that either have a direct physical benefit or don't. (In its simplest form, a controlled study randomly assigns patients to receive either a drug or the equivalent of a sugar pill. If the real thing doesn't bring on more improvement than the placebo does, the drug is a washout.) But what is it that ought to be tested in a study of alternative medicine? To date, the focus has mostly been on testing the physical remedies by themselves—divorced from any other portion of a typical alternative-care visit—with studies clearly showing that the exact emplacement of needles or the undetectable presence of special ingredients in homeopathic water isn't really having any significant physical effect on the patient.

But what's the sham treatment for being a caring practitioner, focused on getting a patient to adopt healthier attitudes and behaviors? You can get every practitioner in each of the study groups to try to interact in exactly the same way with every patient and to say the exact same things—but that wouldn't come close to replicating what actually goes on in alternative medicine, where one of the main points is to customize the experience to each patient and create unique bonds. "We have to be careful about allowing presumed objective scientific methods to trump all aspects of human experience," says Clifford Saron, a neuroscientist at the University of California at Davis who studies the effect of meditation on the brain. "Instead, science has to learn to listen in a sophisticated way to what individuals report to us, and relate those findings to other kinds of knowledge obtained from external measurements."

The University of Maryland's Berman suggests that other types of studies may do a much better job of demonstrating what alternative approaches can or can't accomplish. He's undertaking "cluster care" studies, for example, which attempt to carefully compare how patients fare at different care facilities, and he thinks these studies might offer convincing proof that with certain types of patients, integrative clinics can get better outcomes than their mainstream counterparts. Steven Novella decries such suggestions. "The randomized controlled trial has been the standard of evidence in medicine for a long

time," he told me, "and it's nonsense to claim that we have to lower our standards just to find some way to justify alternative medicine. It's just a fallback position for the alternative-medicine community, after its complete failure to prove its treatments work in good studies."

And yet the question of whether the benefits of the "touchy-feely" aspects of alternative medicine can be proved in randomized trials seems strangely beside the point. That's because just about everyone in medicine, including hard-core critics like Novella and Steven Salzberg, already believes that a more caring practitioner who takes more time and bonds better with patients is an enormous boon to health. "Of course it benefits patients to have a practitioner who spends more time with them, and listens more carefully to them," says Novella. He agrees that a caring, bonding practitioner is more likely to get patients to adopt healthier lifestyles, and that these changes lead to better health. And he agrees that many patients do feel better when practitioners actively try to help them deal with vague, hard-to-diagnose complaints such as pain and fatigue, instead of telling them that there's no diagnosis or effective treatment.

But like most alternative-medicine critics, Novella claims that these aspects of a better patient-practitioner relationship should not be uniquely associated with alternative medicine. Instead, these critics say, we should look to our doctors to be the nurturing caregivers who take the time to listen to us, bond with us, and guide us toward healthier lifestyles and lower levels of stress. "I try to do that with my patients," Novella told me. Does he think most doctors do? "No," he said, after a moment. "I have the luxury of taking time with my patients because I'm at an academic medical center. There are things in the system that have to be fixed before most doctors could do that too."

Every single physician I spoke with agreed: the current system makes it nearly impossible for most doctors to have the sort of relationship with patients that would best promote health. The biggest culprit, they say, is the way doctors are reimbursed. "Doctors are paid for providing treatments, not for spending time talking to patients," says Victor Montori, an endocrinologist at the Mayo Clinic. A medical system that successfully guided patients toward healthier lifestyles would almost certainly see its cash flow diminish dramatically. "Last year, 75 percent of the $2.6 trillion the U.S. spent on health care was for treating chronic diseases that, to a large degree, can be prevented or reversed through lifestyle change," says Dean Ornish of UCSF. Who (besides patients) has an incentive to make changes that would remove that money from the system?

With systemic costs in mind, it doesn't even really make sense to ask physicians—who, after all, spend hundreds of thousands of dollars and a decade of their lives becoming trained in anatomy, biochemistry, high-tech diagnosis, pharmacology, and more—to spend long blocks of time bonding with patients. Other sorts of professionals could be better at the healing, bonding, and placebo-selling part, and for less money. These might include behavioral-medicine therapists, social workers, nurse practitioners, or even some entirely new sort of practitioner specially trained for the task—and working alongside or under the direction of a conventional physician, who could continue to focus on quickly prescribing conventional tests, drugs, and surgeries when they were specifically called for.

Of course, the result wouldn't be much different from what one already encounters in an integrative clinic like Berman's. If an alternative practitioner is also an M.D. or works in conjunction with one, it's

hard to see what's being risked. The biggest catch is likely to be that insurance won't cover most visits, leaving many patients with the difficult choice of paying out of pocket or seeing a covered doctor who doesn't have much time for them.

Rather than going ballistic when they hear that patients believe themselves to benefit under the care of alternative practitioners, argues the Mayo Clinic's Victor Montori, doctors ought to be praising, or at the very least tolerating, alternative medicine for the way it plugs gaping holes in modern medicine. "Who cares what the mechanism is?" he says. "The patient will be healthier."

MONTORI AND AMIT Sood are not the only voices of support for alternative approaches at the Mayo Clinic, a medical center renowned not only for the excellence of its medical care, and for the relatively low cost of that care, but also for a culture that is fanatical about doing whatever is best for each patient over all other considerations. With its soaring, graceful buildings and an almost pious, midwestern earnestness about patient care, the Mayo Clinic feels a bit like the mother church for modern medicine. I met with a range of prominent physicians there to discuss their views on the growing presence of integrative medicine in mainstream medical care, including at the Mayo Clinic itself, which houses what it calls the Complementary and Integrative Medicine program.

One of them was Morie Gertz, a hematologist, who chairs the Mayo Clinic's internal-medicine department. "Most of the doctors here were top of their medical-school class, top of their residency, blah, blah, blah," he told me. "That's technical mastery. That doesn't make them effective healers. Over the past 30 years, I've seen hundreds of patients who clearly feel they've benefited from alternative therapies. It's not my job to tell them they shouldn't feel better. And I wouldn't tell patients they shouldn't try alternative medicine if they want to—we need to follow the clues patients give us about what might help them. If a patient chooses to walk away from the therapy I've prescribed and go to an alternative therapist instead, that's not the fault of alternative medicine; it's because I've failed as a doctor to do a good job of making my case in terms that are important to the patient."

Gertz is among the many physicians who dismiss the lack of supportive randomized-trial data as a reason to write off alternative medicine. "The randomized trial is a very high bar," he says. "Eighty percent of what I do here isn't based on randomized-trial data." Physicians routinely write "off-label" prescriptions, Gertz says—that is, prescriptions that call for drugs to treat conditions for which those drugs have not been officially approved. It's a perfectly legal and ethical practice, and even one that physicians consider essential, accounting for about a fifth of all U.S. prescriptions. "It's off-label not because it doesn't work, but because there's no good randomized-trial data on it. In the same way, we may not have great evidence that alternative medicine works, but that's very different from saying it *doesn't* work."

This notion that alternative medicine is a legitimate response to mainstream medicine's real shortcomings is one I heard, in variations, from everyone I spoke with at the Mayo Clinic. Keith Lindor, a liver specialist, even went a bit further. "I see how often there's little we can do with specific therapies to help patients," he told me. "One of the most common complaints we see from patients is chronic abdominal pain, and we only figure out what's wrong 10 percent of the time. These people deserve a chance to be helped by someone who takes a different approach."

His own positive view of alternative practitioners was shaped early in his career, when he spent time working alongside a Native American medicine man at a reservation clinic. “I had been trained to aggressively treat patients with drugs that often only made them even more ill,” he says. “But he could often do much better with just a press of his hand.” When Lindor himself developed severe neck pain from long hours doing procedures, a doctor suggested drug injections into the base of his skull, but he ultimately found relief from several sessions of massage. The beneficial effects of alternative therapies on Mayo Clinic patients, he says, have been observable in shorter hospital stays, in lower levels of self-administered painkillers, and in reduced tissue inflammation, which is a general indicator that the immune system is better holding its own.

Lindor’s opinion is perhaps of special significance, because he is also the dean of the Mayo Clinic’s medical school. Ultimately, what today’s medical students think about alternative medicine will be more important to the future of medicine than what anyone else thinks of it. Mayo Medical School has woven alternative medicine into its curriculum. And its students seem eager to learn more. Among the dozen or so “interest groups” the student body has set up to arrange further discussion and education outside the normal curriculum is one focused on alternative medicine, attracting about a third of the students, on par with the other groups. “I’m probably not interested in being an alternative practitioner, but I want to learn more about it so I can have a better conversation with patients,” says Lauren Jansons, the ebullient second-year student who heads the group. “As physicians, we learn to identify disease and treat it. What we’re not always taught is to identify with patients, to understand what they’re thinking and feeling, even though that’s important to human nature. It’s an approach that motivates people to be more active in their treatment and healing, and we can channel that.”

In fact, a more open-minded consideration of alternative-medicine practices has become par for the course at medical schools. In recent years, the American Medical Student Association has co-sponsored an annual International Integrative Medicine Day, which, according to this year’s press release, “will increase awareness and availability of integrative medicine, promote inter-professional collaboration, encourage self-care, foster cultural awareness and enhance patient-physician communication” (an “infiltration of quackademic medicine,” blogged David Gorski, a surgical oncologist at Wayne State University and one of the more prickly anti-alternative-medicine warriors, in despair).

Before leaving the Mayo Clinic, I stopped in to watch a small mountain of muscle named Ryan Berry receive massage therapy, through the integrative-medicine program, to address the discomfort he was experiencing two days after extensive thoracic surgery. When I came in, Ryan, who is 34, was stiff with pain, and seemed sewn to the chair in which he had been propped up. He clutched the arms of the chair, grimacing with each shallow breath. Over soothing music, the therapist spent several minutes talking with Ryan, getting him to discuss, through clenched teeth, the details of his pain. When she finally started the treatment, she seemed to barely brush her hands against the top of his back. But within a minute, his hands started to release their death grip, his teeth unclenched, and he was slumping a bit. Within three minutes, he was breathing deeply and slowly, his hands were open and limp, he was sunk down in the chair, and his grimace had been replaced with a hint of a smile. Personally, I doubt it mattered much where exactly the therapist placed her hands and how she moved them, which means a randomized trial would have found the treatment to be no better than sham

massage. But it was as compelling a picture of suffering relieved as I have ever seen.

Scenes like that one, witnessed by more and more doctors in clinical settings, make it obvious why the front lines of medicine are pushing toward a less rigid stance on alternative medicine, if slowly, and in pockets. Open-mindedness can strike in even the most unexpected of places. Steven Salzberg happened to mention to me in passing that he didn't consider hypnosis to be an alternative practice. I asked him why he left it off his long list of shams and frauds, and he seemed surprised, as if he had never considered the possibility that it might not be a legitimate therapy. "I don't know," he said. "I guess it's because my father was an academic clinical psychologist, and he used it in his work." Had he looked at studies on the effectiveness of hypnosis? "Not very closely," he said. "But I believe it works."