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As an undergraduate at Dartmouth College in the 1930s, Dr. C. Everett Koop encountered so many pitfalls it's a wonder he ever survived college, let alone pursued a career as a surgeon. A football injury left him with a damaged cranial nerve and double vision. While ski-jumping, Koop hit a patch of ice, landed on his back, broke his neck and was temporarily paralyzed. Frostbite nearly ruined his hands.

And to top it all off, he almost pursued a career in zoology. Calling it "the only wavering of my lifelong desire to be a surgeon," Koop was fascinated by the study of the fairy shrimp and discovered a new species of it in the process. "My mentors told me I could have the little shrimp named for me," Koop recalls, "and suggested I stay on as a teaching assistant."

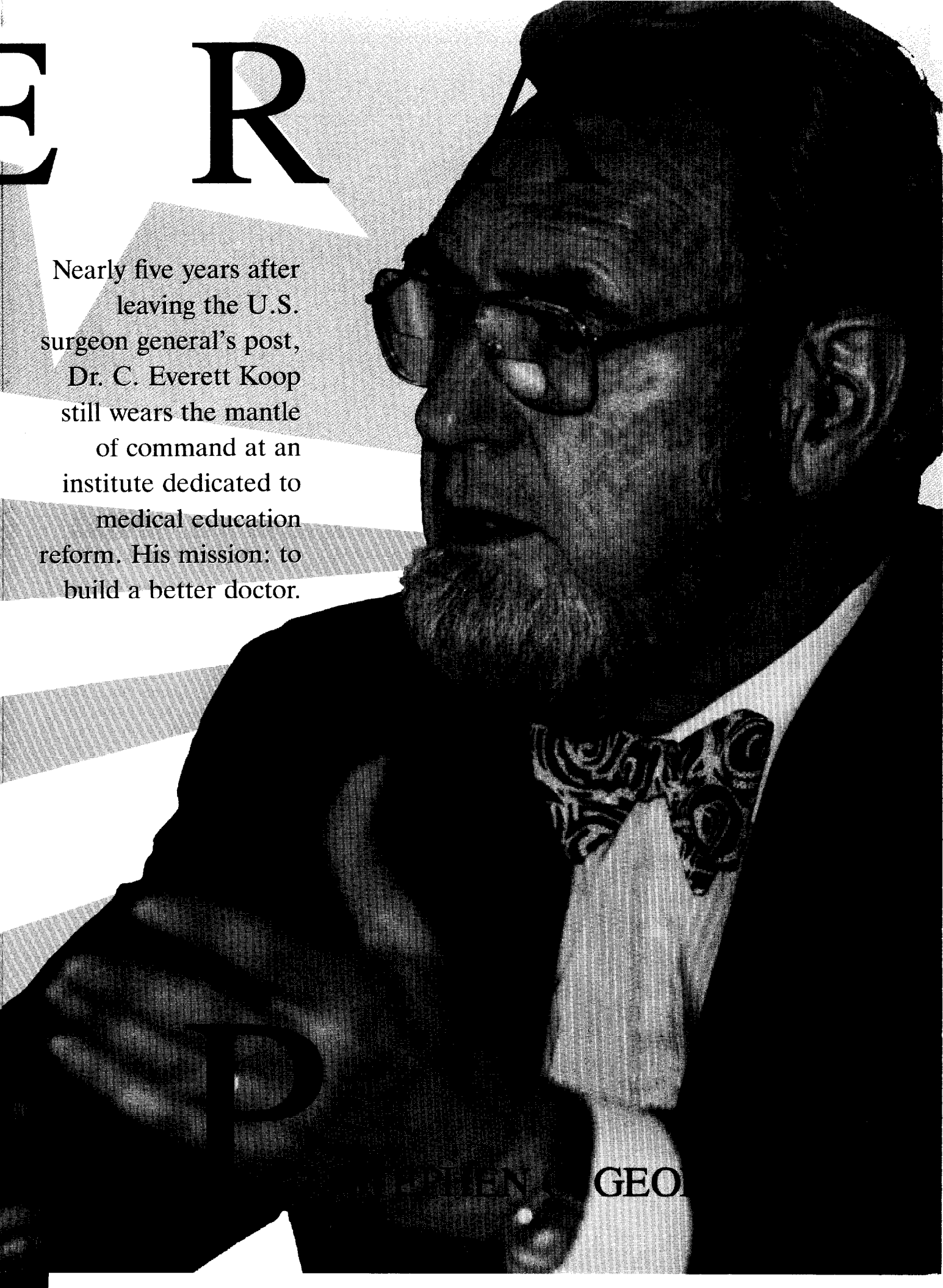
Instead, thanks to proper guidance from a trusted adviser, Koop became a renowned pediatric surgeon and an embattled yet influential figure who shepherded the U.S. Surgeon General's Office throughout the 1980s. Today, the Reagan appointee is one of the most persuasive spokespeople for President Bill Clinton's health reform plan.

Outside the political limelight, Koop has also come full circle academically. He recently returned to Dartmouth with the lure of a project that would bear his name, but this is no shrimp. Marking this fall as the start of its first full year at Dartmouth, the C. Everett Koop Institute (CEKI) aims at nothing short of changing medical school curricula nationwide, solving the primary care shortage and creating a "new kind of doctor for the 21st century"—at once more adept with high-tech tools to control the explosion of

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Nearly five years after leaving the U.S. surgeon general's post, Dr. C. Everett Koop still wears the mantle of command at an institute dedicated to medical education reform. His mission: to build a better doctor.



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KOOP ON...

Since the first copies of the president's Health Security Act were leaked to the press, Dr. C. Everett Koop has been at the forefront of the Clintons' cause. In an exclusive interview with *The New Physician* and at a subsequent press conference, Koop took some time to address issues important to him and physicians-in-training:

The Health Security Act:

Without passing a single law or issuing a single regulation, [Clinton] accomplished more in health-care reform in . . . four months than all of his living predecessors put together. . . . It's a daunting task to face runaway health-care costs, the vexing issue of universal access, the malpractice mess, the mounting problems of Medicare and Medicaid, the applications of outcomes research, a sweeping reassessment of medical ethics, to say nothing of rooting out fraud and waste and abuse and greed.

Promoting generalism via one of his chief goals—making medical school tuition-free but having individuals pay for postdoctorate specialty study:

The [C. Everett Koop] Institute can only bring it about by convincing government that it's right. We're in the process of doing that. If the Clintons demand large increases in the number of primary care physicians in a climate where medicine is not attracting them, then they ought to give the students an offer they can't refuse—free medical education. Unfortunately, the barriers to training all physicians at the taxpayers' cost is that many taxpayers already think physicians make too much money. But the kind of doctors I'm talking about in primary care . . . are grossly underpaid.

Training future doctors to be more patient-friendly:

The first thing we don't know about health-care reform is what patients want. If you think about it, we've never done a systematic study of it. We do know certain things. We know that the No. 1 complaint of patients is, "My doctor doesn't listen to me." The No. 2 complaint is, "When I try to tell him something, he interrupts me." Number 3 is, "When he explains something to me, I don't understand it." So our problem is to make sure that



JON GILBERT FOX

medical education makes communicators out of people, but also makes them understand the absolute necessity of communicating. You can have in your mind the best possible regimen to solve a particular problem, but if you haven't translated that to the patient so he can act on it, there's no point in having seen him.

How medical students can help bring about educational reform:

I'm surprised and pleased at how students are able to bring pressure on faculties to change a curriculum, and I encourage that. At least, I encourage opening and maintaining a dialogue between faculty and students. I think if we could . . . bring about mentoring relationships between faculty and students, faculty would automatically understand what the students' problems are.

His message to physicians-in-training:

They live in a very unusual time because, not only are they facing some major changes for the first time in the history of health-care delivery in America, but they can be the agents of change. So, become involved. The President said . . . he wants a dialogue with doctors and the professions of the American people. Help make that dialogue happen.

medical knowledge, and more competent in such low-tech skills as doctor-patient communication and health education.

This school year, CEKI has begun working with first-year medical students to start the molding process, and Koop has lost no time getting his hands

on the clay. In the first week of school, he addressed the student body twice. Meanwhile, students are participating in a variety of hands-on projects, ranging from visiting grammar-school classes to tinkering with "telemedicine," that will help transform an educational system traditionally weighted

toward the static classroom setting.

"There's been a lot of interaction with students—a lot earlier in their medical school experience," says Jason Reynolds, a first-year medical student at Dartmouth. Reynolds also spent the previous two years doing Ph.D. work in the department of pharmacology. "I

can remember when the Koop Institute was just a rumor," he says. "It's been interesting to watch it start from the ground floor."

Koop got the rumor mill going in 1990, after a brief visit to Dartmouth. Wooed by school officials eager to work with one of the college's most prestigious alums, Koop was offered senior scholar status as part of a program that would push the type of changes in medical education Koop had always espoused. Koop seized the opportunity for a number of reasons, not the least of which being the controlled environment provided by a smaller medical school like Dartmouth, according to Dr. John Duffy, CEKI's director and Dartmouth's dean of admissions.

"There's a certain facility in being able to effect change at a small school with 85 students in each class, instead of a school with 200 students per class," Duffy says. "Of course, it helped that Dr. Koop owns a home here, his children live here."

And so the institute was born as a two-sided entity, one that is a part of the Dartmouth educational system, while at the same time fulfilling a separate and independent think-tank function, removed from the academic milieu. "We're quite schizophrenic," Duffy admits. "On one hand, we are driven by the national and international reputation of Dr. Koop. Organizationally, however, the institute is very much a part of Dartmouth Medical School and the college."

Duffy and Koop seem to delight in this administrative schizophrenia, and it appears to work well for them. Although CEKI purports to have no national agenda for changing medical school curricula, Koop certainly does. As a result, the CEKI office serves as a convenient command post for Koop's post-surgeon general agenda. Faxes and phone calls pour in from around the world, all vying for his attention. He has been consulting with the Clinton administration on health-care reform since May and is currently traveling the country touting the president's plan. At an age when most doctors are content to play the back nine, the septuagenarian surgeon is a blur of activity, quick on his feet, sharp as a tack, well-

versed in current medical issues. Everything he believes, he believes in fiercely, and to sit in a room with him is to be infected with that fierceness, whether you agree with him or not.

And not everyone does. Like most people who succeed in life, Koop has the reputation of thinking quite a lot of himself. Given his curriculum vitae, though, he may be justified. His experience gives him a great deal of viewpoint, and it's hard not to foist it on others. Despite his trademark beard and bow tie, he is like nothing so much as a retired general: still capable of command, of holding the room in his thrall. But he misses the uniform and needs a cause to anchor him. For Koop, there's none better than re-engineering medical education.

"I have to agree with Georges Clemenceau, the great French leader, who said that moving a graveyard is simpler than changing a curriculum," Koop says. "But when you have to impart 20 times the knowledge that I was given in medical school—and you're still imparting it the same way—something's got to give."

As far as reformers are concerned, that first thing will have to be the attitudes of most medical schools. "Even at Dartmouth, there's been resistance" to the kind of sweeping changes CEKI advocates, Duffy says. "There are within the faculty really terrific teachers. But historically, med school curriculum has been dominated by what works for the faculty and not giving a damn about the students."

For the most part, though, Dartmouth medical school faculty say they welcome CEKI onto their campus. Dr. Harold Sox, chairman of the department of medicine at Dartmouth, paints an appealing picture of faculty cooperation with the institute's reform efforts. "We're learning a lot by working with Dr. Koop," he says. "He's very effective at articulating his ideas, and we've got people on the faculty who are eager to translate those ideas into programs."

Dartmouth currently offers no family medicine clerkship on site and no residency in the field at all—a discrepancy the school is trying to resolve as part of its nascent "New Directions" curriculum, for example. This plan parallels the institute's goals of integrating

more clinical experience at the Dartmouth-Hitchcock Medical Center and cultivating more generalist physicians.

The level of cooperation CEKI has seen from the medical school at Dartmouth surprised many people familiar with the workings of academic medicine. "Usually, when someone asks 'How do we bring about change?' it's easier not to answer the question and to keep teaching the way you've always taught," says Dr. Edward Stemmler, executive vice president of the Association of American Medical Colleges. "Each institution has an internal culture all its own that is very hard to change. For real change, somebody's got to have a vision."

A number of other schools also have this vision. Harvard University, Johns Hopkins, New York Medical College, Northwestern University, the University of Arizona and a consortium of medical schools in Philadelphia are just a handful of the institutions that, like CEKI, are bucking the current educational system.

Nationally, organizations like the Kellogg Foundation, the Robert Wood Johnson Foundation (RWJ) and the American Medical Student Association (AMSA) are promoting medical education reform. AMSA, for example, established a Generalist Physicians In Training project to encourage schools to promote family-practice directives. Meanwhile, foundations like RWJ provide seed money to medical schools for community-oriented training. With \$100,000 or so, schools can experiment with their curricula and qualify for an implementation grant: up to \$2.4 million spread over six years.

Many of CEKI's programs involve the community, such as a voluntary project that provides apprenticeships with local family practitioners. Another program, Advisers to Families in Distress, is slated to begin this year. "I think going out and doing respite care and helping a family through a health problem, for example, is ever so much more important than learning certain intricacies about the anatomy of the hand that you'll never use in your life," Koop says.

Another community-oriented voluntary project CEKI has established is

the Ray School Initiative, to help students teach health education. Last year, several students worked with local elementary and secondary schools to teach health promotion and disease prevention, sex education, smoking cessation and other subjects. "We were paired up with public school teachers and had to create a curriculum that would get the information across," explains Megan Sandel, a second-year medical student at Dartmouth. "For example, we had to teach immunology, but first we had to break the information down to the second-grade level."

Not only do such experiences make students better teachers, Koop asserts, it also makes them better communicators. "If they can explain it to a first-grader, they can explain it to anyone," he says.

All of Koop's ideas, however diverse, orbit around a common theme: enabling medical students and physicians to play a more active role in their own education. "The volunteer programs in place so far give us a high level of empowerment," says Eunah Kang, a second-year student at Dartmouth Medical School and a chairman of CEKI's Community Service Committee. "When Dr. Koop first came here and the institute was just starting to articulate its goals, one of the most important aspects was establishing the voluntary programs to give students the choice of determining what they could do—how they could help others—with their free time."

Koop wants to expand the number of opportunities students have for voluntary service by making bigger holes in the curriculum so students can participate in them. He also has worked out the ramifications of integrating computers into medical education—and they just happen to include ways that medical schools can draw more students into primary care.

The most promising of those methods is telemedicine. Using computers and interactive video, rural doctors can confer with larger medical centers on specific cases or for updates on the latest medical knowledge. (See "Remote Possibilities," September 1993.)

"Look out into the countryside and



AP/WIDE WORLD PHOTOS

In addition to his work on medical education reform, Koop has consulted with the Clintons on their health-care reform package since May.

ask what is failing," Koop invites, gesturing out his office window, to the hills of northern New England. "We're not attracting the primary care doctors we want and we're not keeping the ones we've got. Why? Because primary care in rural New Hampshire is not exciting and rewarding and fulfilling. Talk about empowerment: What we're trying to do—with telemedicine and supercomputing—is to take the medical center to the family physician in his office or clinic out there."

And Koop clearly means to use his consulting status with the Clinton administration to push nationwide acceptance—and government funding—of the technology: CEKI recently put on a telemedicine display for *Ira Magaziner*, the administration's senior health-care adviser. "We showed him 12 different ways that high-resolution TV and supercomputing can carry medical messages to remote areas. The technology's available, it's fairly cheap, and it keeps rural doctors in touch with the rest of the medical world."

But Koop has that graveyard to move first. The push for computer literacy as part of med school curriculum change is a slow one, mired by older generations of medical faculty—Koop

notwithstanding—who have neither the time nor the inclination to learn a new trick. At Dartmouth, however, that trick—at least for students—will be mandatory.

"I proposed that students take a 30-minute multiple-choice questionnaire," Duffy says. "Those who do not achieve a passing grade will have until the end of May to take one of the courses offered by Dartmouth to fulfill the requirement of becoming computer-literate."

It's just one of the messages Koop intends to convey to his students as, resplendent in his Dartmouth-green bow tie, he ambles across the campus, preparing to give them another speech.

Koop is the first to admit, however, that computer-literacy, as with other types of medical reform—including the federal legislation he currently champions—is not always openly embraced by the health-care community. Unfazed, the general sets his steely gaze.

"It's not something that catches on in a lot of places," he agrees. "So where it doesn't catch, you just push it." □

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