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Educating Tomorrow's Doctors: The Thing That Really Matters Is That We Care

ABSTRACT

The unique purpose of medical schools is to select and educate competent, caring physicians capable of meeting society's expectations for health care. The author discusses this purpose first in the context of liberal education, which provides a broad perspective essential in the education of doctors and other professionals. Such an education can be achieved partly by how medical students are selected and by effectively uniting it with professional learning. The most important goal of liberal education is to promote intellectual wholeness as a lifelong pursuit of physicians.

Second, the author reviews medical curricula, which have been slowly evolving away from a focus on providing instruction and toward one of producing learning. This new approach is a more rational one, and can be seen in some schools' reductions of lectures and increases in team teaching and problem-based learning, and earlier exposure of students to patients, especially in ambulatory

care settings. An important role of medical educators is to provide enough free time for students to learn, and to pay attention to the "informal curriculum," where the unwritten ethical codes of medicine are revealed.

The author then turns to issues of professionalism, especially that elusive part that goes beyond expertise. He emphasizes that the training of tomorrow's doctors is ultimately a public goal, and that medical schools must help restore public trust in doctors by selecting and nurturing professionals who see medicine in a broad social context. He reiterates that a liberally educated doctor is most likely to have such an outlook, and concludes by urging medical educators to remember that there is no substitute for a doctor's competence, caring, and professionalism expressed in the context of a liberally educated mind. And that the most important thing that educators can do as they bend to their task is to care.

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Medical school faculty play profound roles in America's health care delivery, and in the continuum of research that advances health in the public interest. But the unique purpose of a medical school is to select and educate competent, caring physicians capable of meeting society's expectations, because

no one else does this. I am an advocate of that unique purpose, which is the underlying focus of this essay.

I want to discuss learning, but with as much emphasis on the products of the educational process as on process itself. I want to discuss professionalism, but especially that elusive part of professionalism that goes beyond expertise. And I want to explain why what we in academic medicine do as we train tomorrow's doctors is ultimately public in purpose. Today's tendency to treat medicine as a business, health care as a commodity, patients as covered lives or consumers, and doctors as providers threatens not only academic medicine but the core values of our profession. My most important message is that a liberal education is the best foundation for sustaining the values of our profession and for cultivating the kind of doctors our country needs most.

This article is a slightly edited version of the author's Alan Gregg Memorial Lecture, given at the 107th Annual Meeting of the Association of American Medical Colleges held in San Francisco, California, November 6-12, 1996. Dr. Wallace is dean, Dartmouth Medical School, Hanover, New Hampshire.

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LIBERAL EDUCATION

When I came to Dartmouth Medical School as dean, an important part of my rationale was that that school was a place that could turn out the kind of doctors our country needs most. It was small. The clinic was already a group practice, and the hospital was dedicated to the community. The students were awesome, and the faculty were committed to their teaching and research. The ethic of the place felt right. However, my chief reason for choosing Dartmouth was that I sensed an unusual opportunity to unite liberal and professional education. I felt then, as I do now, that a liberal education is the soundest platform for our profession.

In his recent book, *Idealism and Liberal Education*, Dartmouth's president James O. Freedman explained why liberal education is so important:

A liberal education acquaints students with the cultural achievements of the past and prepares them for the exigencies of an unforeseeable future. It provides them with standards by which to measure human achievement. . . . It offers the opportunity to develop humane empathy and moral courage. . . . It helps students to find their distinctive ways through the complicated and uncertain process by which intellectual and moral maturation occurs. . . . At the heart of liberal education lies a conception of intellectual wholeness.¹

Who among us could equal the eloquence of those words or debate the relevance of those perspectives to the practice of medicine? But are these perspectives confined to those who practice medicine? I think not. Harold Varmus wrote an essay titled "Preparing for a Lifetime in Science" for a 1990 Amherst alumni magazine issue. In it he said,

Presuming that I would have simple answers to such questions, parents sometimes ask me whether a small liberal arts college is a suitable place for a student who already wants to be a molecular biologist. As a molecular biologist who warmed to laboratory life only . . . after protracted dalliances with literature and clinical medicine, I am a confirmed proponent of prolonged adolescence and career indecision. . . . There are few things in life I value as much as the diversity of my education at Amherst.²

After reading something about medicine and about other professions—engineering and law in particular—I am convinced that the value of a liberal education, and the breadth of perspective it conveys, is not limited to the profession of medicine. For example, Freedman points out how Supreme Court Justice Felix Frankfurter poignantly responded to a 12-year-old boy who sought his advice on how he might prepare for a career in the law. Frankfurter said,

No one can become a truly competent lawyer unless he is a cultivated man. . . . The best way to prepare for the law is to come to the study of the law as a well-read person. Thus alone can one acquire the capacity to use the English language on paper and in speech and with the habits of clear thinking which only a truly liberal education can give. . . . Stock your mind with . . . much good reading, and widen and deepen your feelings by experiencing . . . the wonderful mysteries of the universe, and forget all about your future career.¹

As we contemplate the education of physicians for the twenty-first century, my first message is that I know of no substitute for a liberal education in optimizing the general preparation of future professionals.

This message is directed to how we select students from among the large number of qualified applicants. And it is also directed to the opportunity we have to unite liberal and professional learning. But, most important, it is directed toward the promotion of intellectual wholeness as a lifelong pursuit of physicians.

Robert Frost, a Dartmouth alumnus, put it this way:

My object in living is to unite
My avocation and my vocation
As my two eyes make one in sight.
Only when love and need are one,
And the work is play for mortal stakes,
Is the deed ever really done
For Heaven and the future's sakes.³

DIVERSITY

The commitment that U.S. medical schools have made to diversity, which the Association of American Medical Colleges (AAMC) recently reaffirmed, is an integral part of a commitment to a quality liberal education. Clifton Wharton, former chancellor of the State University of New York, and a former chair of the Rockefeller Foundation, took an unexpected tack in his 1986 address to the AAMC on diversity.⁴

He laid out three broad themes: diversity in service, diversity in research, and diversity in learning. Under service, he emphasized our aging population, the growing share of our population who are non-white, and the feminization of poverty. Under research, he urged us to proceed apace toward a clear understanding of life's most fundamental processes. But he also urged us to expand our vision to include that mixed bag he called "social diseases," which range from, say, homelessness to abuse to anorexia. And under learning, he expressed deep concern over the growing erosion of health care professionalism by the commodification of medicine. Standing back and considering diversity from a

distance, he concluded that "diversity itself seems to have become the challenge" to education.

The AAMC has placed the enhancement of the diversity of the medical workforce at the top of its agenda for a host of reasons: social justice, educating students from all quarters, creating a workforce more nearly in balance with the nation's demographics, etc. Dartmouth's president Freedman said that in addition to racial and geographic and economic diversity, "most colleges have sought to create a diverse student body—with poets, athletes, actors, debaters, (and even) butterfly collectors. . . ." Why? Because "it is unwise to assemble a student body made up entirely of people who are very much like each other." The message was simply this: "A commitment to diversity is a commitment to educational excellence."

THE MEDICAL CURRICULUM

My second message is that the primary goal of medical education is learning, not instruction. Much has been written about the curricula of America's medical schools. The first American medical school was established at the College of Philadelphia, now the University of Pennsylvania. The second was Kings College in New York, which suspended operations during the Revolutionary War, then was revived and renamed Columbia. The pattern in those days was to list a few science courses relevant to medicine in the college syllabus, followed by six to seven months of clinical work, and then to award a degree that was called "Bachelor of Medicine."

Real reform in American medical education began with two men who both studied in Germany in the 1870s and later became university presidents.⁵ They were Daniel Gilman of Johns Hopkins and Charles Eliot of Harvard. Neither was a physician. Gilman established a three-year preliminary medical course, which included chemistry, physics, and biology in the first year; logic, history, and psychology in the second; and a third year that emphasized human dissection. He also began to require a baccalaureate for admission to medical school. Eliot also instituted the practices of requiring a baccalaureate, of collecting tuition rather than having individual faculty do so, and of appointing the medical faculty.

"Abraham Flexner visited 147 American medical schools between January of 1909 and April of 1910. In a single month, April of 1909, he visited no less than 41."⁵ He was convinced that the Hopkins model was the right one and that those used by Harvard, Yale, and Stanford were acceptable. Most of the rest he variously classified as either "wretched, without a redeeming feature, or decidedly inadequate."⁶ His 1910 report on medical education laid out what he thought was the ideal curriculum: premedical requirements, the traditional basic sciences in the first two years of medical school, and then two years of clinical clerkships.⁶

What I did not know, until I read former Dartmouth Medical School Dean Carleton Chapman's account,⁵ was that by 1925 Flexner was appalled by what had happened after his report. Prescribed work consumed the entire day and left no time to read, work, or think. Despite his criticisms and pleas, even Flexner could not reverse a process he, more than any other, had set in motion.

Here is an aphorism from Alan Gregg's journal: "Good judgment comes from experience; experience often comes from bad judgment."⁷ (For more concerning Gregg, see the boxed text entitled "About Alan Gregg" in this essay.)

Many have argued that "medical schools have done little to correct the major shortcomings in the ways they educate their students. . . ." My view is that over the past 30 years there has been a major, although gradual, evolution toward a more rational paradigm. Case Western Reserve, Duke, McMaster, Harvard, and others have reduced formal lecture hours, focused on team teaching, moved to problem-based learning, and increasingly exposed students to patients early and in ambulatory care settings.

This evolution is incomplete, but a positive shift has occurred. It was captured succinctly by Robert Barr and John Tagg, who wrote that in the past a university existed "to provide instruction." The new paradigm is that a university "exists to produce learning." The mistake in the old paradigm, they said, was to confuse "a means with an end."⁹

This new paradigm creates the flexibility we need to help our students. Basic principles are as important as they ever were, if not more so; so are skills in history-taking and physical diagnosis; and so is exposure—on a level playing field—to the disciplines of internal medicine, surgery, pediatrics, family medicine, and the other specialties. After all, among the purposes of the undergraduate medical experience is to give our students a basis for making career choices.

Our challenge is to enhance environments where students learn how to ask questions and find the answers, to tap the power of information technology, to work in teams, to make decisions based on evidence, and to witness physicians who include patients when making the decisions that affect their lives. The goal is learning, not instruction. Our role is to protect enough free time to learn, because without such freedom there is no learning.

THE INFORMAL CURRICULUM

Those of us who are medical educators know that our students learn essential things in the classroom, on rounds, and from books and journals. None of us would deny that role models are the templates that express the most essential behaviors. But some of us have underestimated the power of what Edward Hundert from Harvard has called the "informal

About Alan Gregg

This essay was originally the 39th Alan Gregg Memorial Lecture, which I was honored to give at the annual meeting of the Association of American Medical Colleges (AAMC) last November. The Gregg lectures were established by the AAMC to bring focus each year to the fundamental purpose of our nation's medical schools. It was natural to honor Gregg in this way, since he has been described as "one of the greatest educational statesmen of his generation."²⁰

Wilder Penfield, in his excellent biography of Alan Gregg,⁷ tells us that Gregg was born in Colorado Springs in 1890 and received an AB degree at Harvard College and an MD at Harvard Medical School. He interned at the Massachusetts General Hospital and served in the Royal Army Medical Corps, Harvard Unit, from 1917 to 1919. From 1919 until his death in 1956, he worked for the Rockefeller Foundation.

He was the youngest of seven children. His father was a teacher who later became a pastor; his mother was an accomplished musician. Their home in Colorado was filled with books. Every night the family read to each other, and together they mastered French, Latin, German, and Greek.

At Harvard College Gregg was not a particularly strong student. He was more interested in the people than the courses. After college he took time off to travel and to reflect on what he should be and where he should study.

As a Harvard medical student, Gregg recorded his thoughts in a journal that he maintained religiously for the rest of his life. One thing we learn from his journal is that he felt the medical school failed to teach him critical thinking. So he audited courses at Harvard Law School, where he felt the faculty encouraged students to think, not merely to memorize the facts. (For my friend Daniel Tosteson, dean at Harvard Medical School, let me emphasize that this was before the New Pathway.) As an intern, Gregg was frustrated with his inability to make much of a difference in the lives of his patients. So he decided his ultimate interest would be in public health.

After two years in France during World War One, he applied for a job with the Rockefeller Foundation. Later, as a representative of Rockefeller, he spent seven years studying medical education in Germany, France, Italy, and the United Kingdom. In 1931 he was called

back to foundation headquarters as director of its Medical Sciences Division.

With the possible exception of Abraham Flexner, Alan Gregg knew more about medical education than any other man of his time. During his tenure at Rockefeller, the foundation provided more support on behalf of medical education in America than did all other philanthropic organizations combined. Yet it was his continuous engagement with medical education, and his extraordinary commitment to understanding medicine in its social context, that made Alan Gregg the statesman he was.

There is an interesting connection between Gregg and Dartmouth College. John Sloan Dickey, Dartmouth's president from 1945 to 1970, served on the board of the Rockefeller Foundation, where he learned to know and greatly respect Gregg. In 1955, perplexed over what to do with his two-year medical school, Dickey turned to Gregg for help with his dilemma. Gregg traveled to Hanover, put his site-visiting prowess to work, and rendered an optimistic report. So Dartmouth has a four-year medical school today, in no small measure because of Alan Gregg.

John Sloan Dickey was one of Dartmouth's most often-quoted presidents. A message of his that I have used frequently in speaking to our students is: "To understand what is special about Dartmouth, you need to understand that it cares more about what you will *be* than what you will *do*."²¹

Alan Gregg's life was a model of what Dickey was talking about; of what a person can be. Gregg was a broadly educated man, a physician who happened to develop a passion for public health rather than practice. From his enviable position with the Rockefeller Foundation, he applied his knowledge to shape medical education in America for a third of a century.

In his biography of Alan Gregg, Penfield said, "He had large horizon-sweeping vision . . . and a scorn for what he called five-and-ten-cent stuff."⁷ Penfield called Gregg's journal, noted earlier, his "commonplace book." Here is an entry on March 28, 1918, as the Germans were mounting their great offensive and Gregg was giving anesthesia to one soldier after another: "The thing that really matters is not whether you do this or that well. The thing that really matters is how much you care. . . ."⁷

curriculum." At a 1996 Council of Deans meeting he convincingly argued that it is within the domain of the informal curriculum that the unwritten ethical codes of medicine are revealed and where the plasticity of behavior is most evident.¹⁰

Let me close this discussion of the curriculum by quoting some remarks that a 1996 graduating medical student from Dartmouth, Sidhu Gangadharan, made to his classmates: "I read this in a newspaper: 'A 47-year-old man presented to a Florida hospital. . . . He had vomited in his bathroom, and then began to vomit blood. By the time the ambulance . . . brought him to the emergency department his upper GI hemorrhage was massive. . . . He died 18 hours after admission.'" Sidhu went on: "The rest of the story tells us [this patient] drank continuously, alternating between Falstaff and Johnny Walker. . . . He had recently noticed a 20-pound weight loss, . . . he looked ashen and unkempt to his friends, . . . a hernia protruded from his navel."

The clinical picture was clear to Sidhu: "cirrhosis, portal hypertension, ascites, varices, and the coagulopathy of liver disease. But what we know [Sidhu told his classmates], once we learned that our patient's name was Jack Kerouac, is that his decrepit body housed a soul that said yes to experience, yes to life. What we know [are] his novels, poems, spoken word. I carried *On the Road* with me like a Bible when I was in college; I could not believe words could articulate such passion for adventure."¹¹

Sidhu read this passage from Kerouac:

The end of our journey impended. Great fields stretched on both sides of us; a noble wind blew across the occasional immense tree groves and over old missions turning salmon pink in the late sun. The clouds were close and huge and rose. "Mexico City by dusk!" We'd made it, a total of nineteen hundred miles from the afternoon yards of Denver to these vast and Biblical areas of the world, and now we were about to reach the end of the road.¹²

In these excerpts from a student's 20-minute talk are liberal education, medical knowledge, ethics, the power of the informal curriculum, and communication, all rolled into one; these factors produce the kind of doctors our country needs and wants.

PROFESSIONALISM AND THE PUBLIC PURPOSE OF MEDICAL EDUCATION

My third message concerns professionalism, especially that elusive part of the definition that goes beyond expertise. When I connected my computer to the Dartmouth Library's on-line catalog and pushed FIND and TOPIC and PROFESSIONALISM, I got 136 articles and 65 books on the first pass alone. Even the definitions multiplied without end. But the defini-

tion that seemed best was attributed to Supreme Court Justice Louis Brandeis in response to the question, "What constitutes a profession?" He said,

A profession is composed of a body of knowledge a substantial portion of which is derived from experience. A profession is responsible for advancing that knowledge and transmitting it to the next generation. A profession sets . . . its own standards . . . , and it cherishes performance above . . . personal rewards. And finally, a profession is directed by a code of ethics which includes the moral imperative to serve others.¹³

The key words are all here: knowledge and experience (and by inference, expertise), advancing knowledge, performance above personal reward, standards, and serving others.

In *The Professions in American History*, Nathan Hatch notes: "Americans have sustained a veritable love-hate relationship with the role of experts in a democratic society."¹⁴ Kenneth Pye told the Duke Medical Alumni in a 1982 talk, "A Layman Looks at the White Coats," that

all professions have a privileged status in American society, and the profession of medicine is more privileged than most. Special privileges are always vulnerable . . . , but never more so than when people become dissatisfied with a condition which they associate . . . with those to whom special privileges have been granted.¹⁵

He went on to say that medicine, "while largely private in structure is public in purpose."

Our public posture and the scale of our enterprise have enormous consequences for all of us. One of the most important is accountability. I want to suggest a framework for thinking about accountability that, I hope, is on a higher plane than report cards.

Twenty-five years ago, I had the privilege of hearing Jay Forrester speak. He was then at the Massachusetts Institute of Technology (MIT) and had just written a book, *World Dynamics*, on world population.¹⁶ Forrester's approach was to consider that social systems belong to a class of multilooped feedback systems that can be described and modeled. For example, in his model describing population, he noted that fertile land, an increasing labor force, and technology all promote growth, while overcrowding, pollution, conflict, and resource shortages are ever-rising pressures that restrain growth. His basic message was that complex social systems, like the systems we are familiar with in biology, ultimately change from growth to equilibrium through feedback, or cybernetics.¹⁷

The word *cybernetics* was coined by Norbert Wiener, also from MIT. It was derived from the Greek, *kubernetes*, mean-

ing "to steer." I suggest that the concerns of the public we serve—and even the public's ambiguity about professionals—are manifestations of feedback that is built into the behavior of our social system.

The public concern with medicine is not about expertise per se, for as David Blumenthal said, "asymmetries of information . . . between health providers and their patients" are understood, expected, and desired.¹⁸ It is not with our research and teaching; opinion surveys indicate that the public supports these efforts. The issue is trust! An essential way for medical schools to help restore public trust is to select and nurture professionals who see medicine in a broad social context, who have learned to listen to feedback, who are capable of responding and communicating clearly and honestly in those areas and about those issues where they are uniquely qualified to contribute. Again, I suggest that the social value of professional expertise is best expressed in the context of a liberally educated mind.

LEADERSHIP

Margaret Mahoney, former president of the Commonwealth Fund and recipient of a distinguished service award from the AAMC, has always been a friend to academic medicine. Among the many ways she expressed her wisdom were her essays in the issues of Commonwealth's annual report.

In her 1984 essay on leaders, she took as a case in point George Catlett Marshall, general of the Army, secretary of state, statesman, and diplomat. After recalling his boyhood experiences she said,

Leaders share common characteristics—above all the ability to see the picture whole . . . to bridge the factions . . . to resolve the dichotomy between goals of individuals and of institutions. . . . The challenge to our educational leaders—both in medicine and across the board—is to require a breadth in education that will develop men and women who can deal with complexity lucidly. . . . We must not leave leadership to chance.¹⁹

CONCLUSION

Alan Gregg was the kind of man Mahoney was talking about: a physician with a liberal education, an expert with breadth, a professional with a public purpose, a leader. Learning who he was, and how he became the great educational statesman that he was, has been my reward for preparing this lecture. We need more like him!

Let me share a final Alan Gregg aphorism: "Take as a career something that in its difficulty requires resolve, in its complexity brains, and in its accomplishment gives lasting satisfaction."⁷

Surely, medicine meets the criteria in that exhortation. As we select and prepare doctors to meet society's expectations in the twenty-first century, we must remember that there is no substitute for a doctor's competence, caring, and professionalism, expressed in the context of a liberally educated mind. And as Alan Gregg said, the thing that really matters as we educators bend to our task is that we care.

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