Perspectives

We must turn our disease treatment centers into true health centers

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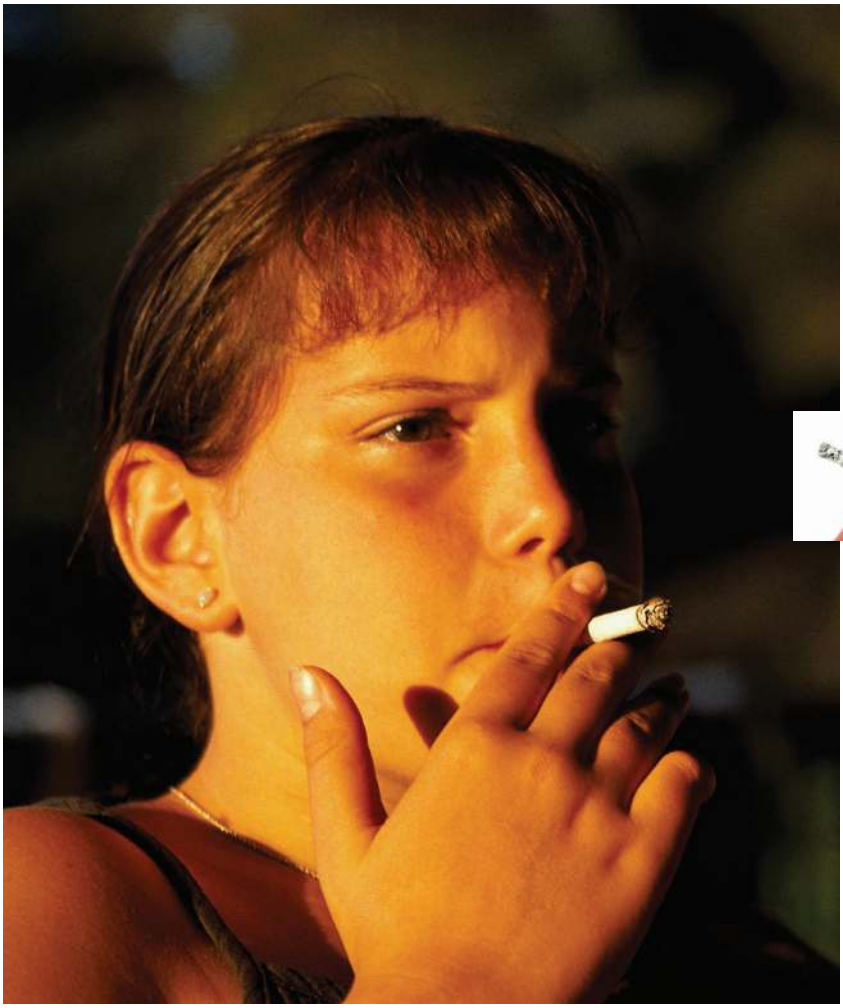

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> When thinking about a disease, I never dream of finding a remedy for it, but instead a means of preventing it.
>
> —Louis Pasteur[1]

Our U.S. "health centers" are really "disease treatment centers," and they train "disease treaters" not health care workers. This partly explains why we have the best medical care in the world, but rank at the bottom of developed nations and even below some developing nations in health care measures such as infant and maternal mortality. It may also partially explain why we spend so much more on medical care than any other nation. Contrast the cost of preventing tobacco use versus treating lung cancer, or preventing obesity versus treating diabetes for decades. Granted, our health care reimbursement system is partially at fault, but so is our medical education system. Medical educators can and must change the curriculum. True health centers and health care workers must focus on disease prevention and health promotion as well as disease treatment

Who are McGinnis and Foege?

I recently visited a major medical center in the Southeast. Everyone in the medical class knew about James D. Watson and Francis Crick's classic 1953 paper.[2] Few, if any, knew about the classic 1993 paper by J. Michael McGinnis and William H. Foege.[3] Which is more important for a future practicing physician, knowing the structure of DNA or knowing the preventable causes of death? For that matter, how many physicians know that McGinnis and Foege showed that about half of all U.S. deaths are due to preventable causes—unhealthy habits? For example, tobacco use accounts for 20 percent of all deaths. Obesity/inactivity is approaching 20 percent and alcohol is the cause in about 5 to 10 percent of all deaths. I graduated from medical school in the 1950s. I never heard of DNA, or at least do not remember hearing about it in medical school. I taught medical students for 37 years and I can attest to the dramatic changes in the medical school curriculum content that resulted from understanding the structure of DNA. Medical educators need to work equally hard over the next few decades to bring about the profound changes that should result from the work that McGinnis and Foege did.

It is already a decade since McGinnis and Foege's paper, and much less has happened in "medical education" than occurred in the first decade after Watson and Crick. Why is this true? One of the problems in teaching medical and other health professional students about disease prevention and health promotion is that it does not compete well with the anatomy of the shoulder or the Krebs cycle. When lecture time is made available for health promotion/disease prevention, the content is often undervalued because the concepts are simple and easily memorized. The examination questions, if fair, are

therefore easy. Another problem is the interests of medical school faculty. They are devoted to their disciplines and most are unaware that unhealthy habits account for half of all U.S. deaths. Perhaps the biggest reason is that most medical schools lack organized proponents for health promotion/disease prevention and for substance abuse education.

Preventing bad habits—easier than changing them

At the University of Florida, our team has evolved an approach to this problem. As early as possible in the school year, our freshman medical and dental, fourth-year nursing, and fifth-year pharmacy students go into middle schools for a day to teach 16,000 students about tobacco. Their first service activity focuses on the fundamental principle that it is easier and better to prevent bad habits from forming than to try to change them later. Thanks to the leadership of the Area Health Education Centers this approach has been disseminated to Florida's other health centers, thereby reaching almost all of Florida's medical and dental students, plus many nursing and pharmacy students. These 1200 professional students teach about 40,000 middle school students each year. In preparation for this day of service, they quickly learn the concepts in didactic and small group learning exercises. They also learn that the concepts are simple, but that the challenge is to get others to accept and adopt those concepts. Students are also introduced to motivational interviewing. This includes the concept that it is more effective to understand why people smoke than to tell them what they already know, namely that smoking is bad for their health and potentially lethal. In the third year of medical school, our students are required to do two motivational interviews with smokers. One of the Objective Structured Clinical Examination stations on the family medicine final examination is a smoker.

What we have accomplished—with the first-year health promotion/disease prevention middle school activity and the two third-year required motivational interviews—is a start, but we have a long way to go. Imagine if students were required to do only two histories and physicals during medical school! Because half of all deaths are due to unhealthy behaviors, helping health professionals learn how to help patients change those habits should receive as much curricular emphasis, and as much federal research support, as disease diagnosis and treatment do. Our nation needs more effective methods to help people change unhealthy behaviors and needs health professionals trained to use them. Our medical students seem to understand this better than do many faculty.

References

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Perspectives

Coffee, doughnuts, and mortality

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The casual talk about last night's basketball game ended at 7:05 Wednesday morning as the last of the coffee was drained. Doughnuts and snack bars disappeared. Our weekly hour-long morbidity and mortality conference began. The lecture hall filled with anesthesiologists, residents in training, nurse anesthetists, and medical students. Today we were to witness a rare and profound experience in medicine.

The speaker, a professor of anesthesiology, described the anesthesia for surgery to repair a detached retina in an otherwise healthy 36-year-old man. Induction of general anesthesia was uneventful. Midway through surgery, the patient's blood pressure became undetectable. Immediately the anesthesiologist, surgeons, and nurses performed CPR. Nothing worked. The unthinkable, the inconceivable, the feared became reality—the young man could not be resuscitated. A patient who had entered the operating room in excellent health with a minor eye problem was dead.

The next day, an autopsy was performed. The anesthesiolo-

gist was there, hoping for answers. Air was discovered in the right atrium and cerebral vessels. No etiology was established. No understandable cause of death.

The anesthesiologist had practiced medicine for almost two decades. He was widely known as a competent, knowledgeable doctor with a calm disposition. Surgeons respected him. His presentation of the operative course was delivered clearly and with composure. Information about the timing of the arrest, discussions with other health care workers in the operating room, and names and dosages of the drugs given were conveyed in a concise, deliberate, and purposeful manner. This all changed as he told us of going without delay to the waiting room to inform the patient's wife—the mother of their six children—that her husband had died. As we watched, he grimaced, his speech slowed, he stammered. He was on the verge of tears. The lecture hall became silent. This heartfelt, demonstrative display of humanity must have made many in the hall uncomfortable. But I was honored to witness this unchecked outpouring of grief and self-doubt. I felt great respect and admiration for this courageous, honest man.

Traditionally, medical school and postgraduate training proscribe the expression of emotions. Sharing grief, sorrow, regret, disappointment, and failure are discouraged. Do physicians need to hide emotions for fear of appearing weak, or is it a protective adaptation to the pain and death inevitable to our profession?

The ability to practice medicine is a gift and a blessing. With this extraordinary occupation comes a constellation of rewards: autonomy, mental stimulation, prosperity, status, job security, and strong bonding between coworkers. But in no other occupation is the range between success and failure so great, from saving a life to being responsible for a death.

Physicians must accept the difficult lesson that however smart or well-trained we are, however well prepared, we cannot always alter the path our patients are destined to follow. Now, months after the intraoperative death, our anesthesiologist is still haunted. He replays the events in slow motion, searching for any clue that he made a poor judgment, a miscalculation, a blunder, even a miniscule error.

In more than 20 years as an anesthesiologist I do not remember a similar story of the sudden, unexplained death of a young, healthy individual during surgery. Contemporary anesthetic care is incredibly safe. Nevertheless, my ever-present prayer is, "Please don't let *my* patient die in the operating room."

The case presentation concluded in an extraordinary fashion. No questions were asked, no comments given. Many of us wanted to know more details, but our desire for additional information was extinguished by a shared wish not to inflict additional pain on our already tormented colleague. On this day, academics became less important than graciousness and respect.

After the conference, I left the lecture hall in silence. I walked across the brick plaza, opened the door to the hospital, and went to the operating rooms as I had done with confidence a hundred times before. But today I felt fragile and scared. In less than two minutes, I would have to shed my thoughts and fears and make the transition to my everyday doctor's life. My first patient, a 51-year-old man, lay on the table before me. With heightened awareness for the gift of life, I prayed for his recovery.

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