Can a course in the history of medicine prove as valuable in the long term as, say, a course in organic chemistry? This is a question I often ask my aspiring pre-med students at the University of Oklahoma Honors College, where I’ve taught since 1999. I’m an historian of medicine, so admittedly there is a certain bias that frames my question. I also direct the OU Medical Humanities Program—make that bias2.

Before arguing the merits of history and chemistry, however, we should begin with a definition: the medical humanities (including the “history of medicine”) encompass the study of health, disease, and the healing professions from the perspectives of literature, history, philosophy, ethics, anthropology, sociology, and religion. A close examination of the political, spiritual, ethical, cultural, and historical dimensions of health and the management of disease offers vital insight into the nature of medicine. Why? Because medicine is a social enterprise, one in which scientific practices are informed by cultural values and moral principles. A disease is shaped not only by its underlying pathology but also by the demographics of its sufferers and its perceived cause and prognosis. Ultimately, deepening our understanding of health, disease, and medicine through the interpretive lenses of the humanities has a practical payoff: more effective health care and (I hope) better health.

Back to my Honors students and that all-important question. How do they respond? Well, they’re bright and frequently pragmatic; they know that the conventional answer is “no.” Organic chemistry is, after all, a course required for admission to most U.S. medical schools. Earning an “A” in organic chemistry impresses a lot of people (mostly fellow pre-med students and physicians who sit on medical college admissions boards). Whether or not practicing physicians regularly refer to organic chemistry is another question. Still, the responses of students in my “Historical and Ethical Issues in American Medicine” courses are divided. Many reply that if your immediate goal is to get into medical school, doing well in organic chemistry is unquestionably helpful. They’re right. A sizeable percentage of students, however, realize that I’m being deliberately provocative, and they enjoy pushing themselves to think in new ways. “Sure,” they say, often pointing to the value of biography in the history of medicine. Studying the lives of doctors such as William Osler (the Johns Hopkins physician known for his consummate diagnostic powers and insight into the human organism) and Elizabeth Blackwell (the first woman in America to receive a medical degree) provides inspiration to future physicians, for these historical figures offer superb examples of professionalism, tenacity, and dedication to the betterment of humankind. Studying these physician exemplars
reminds students of the core values of medicine, reveals the true nature of medical practice—both science and art—and cultivates a sense of shared history in a hallowed profession.

Other students, echoing the famous words of George Santayana, note that those who are ignorant of the problems of medicine’s past may be condemned to repeat them. One such disturbing episode is the infamous Tuskegee Syphilis Experiment (TSE), conducted by the U.S. Public Health Service (USPHS) between 1932 and 1972—research that was published in major medical journals during that time. In the experiment, USPHS doctors tracked 600 African American men in Alabama (399 with a syphilis diagnosis and 201 who served as controls), from the moment they entered the study until their death and autopsy. USPHS officials withheld treatment for the disease (even after penicillin was available) and misled participants to believe they were being treated for “bad blood,” which they were not. The study’s real goal was to see if syphilis progressed differently in blacks versus whites.

The rationales for withholding treatment were shaped by racial biases of the early twentieth century. Some investigators believed that the men would not have the discipline or interest to comply with the long-term follow-up required for the arsenic treatments of the 1930s and 1940s. Others considered black men inherently hypersexual and promiscuous—two then-prevalent stereotypes—and likely to be serially re-infected, rendering treatment ineffective. Still others thought the men would never receive appropriate treatment because they were poor and living in the rural, segregated South, with little access to medical care. These researchers were content to capitalize on the men’s misfortune “for science.”

The TSE left a complicated legacy. Two of the most important outcomes were that: (1) many African Americans came to distrust the medical profession, in general, and medical researchers in particular; and (2) in 1974, following revelations about Tuskegee, Congress passed the National Research Act, mandating that universities and research institutions establish review boards to monitor biomedical and social science research involving human subjects, and to require researchers to obtain informed consent from participants. Tuskegee reminds us that medicine’s first priority is the patient, and that researchers must ensure that their subjects’ rights are respected in the acquisition of “useful scientific data.” Indeed, the TSE highlights how the definition of “useful data”—including how it is acquired and how it is applied—can be affected by social assumptions, including stereotypes about human differences.

But is this sort of knowledge—studying the missteps of clinicians and researchers, as well as the successes of the past—useful to physicians, medical students, and patients? Might it lead to better health care? I believe the answer is “yes.” Knowledge of the Tuskegee case, for example, can help clinician-researchers better understand why they may have trouble enrolling African Americans in their clinical trials. Physicians who are unable to get full cooperation from middle-aged or older African American patients may come to appreciate the real and historical reasons these patients may be reluctant to comply with their advice. Doctors in such situations may need to go the proverbial extra mile to secure patients’ trust.

Though we have come a long way from Tuskegee, it is clear that history can help us understand some of the structural impediments to accessing health care and achieving good health. For example, the large disparity between white and black median household incomes ($32,229 for blacks; $55,412 for whites in 2011, according to U.S. Census Bureau information) is due, at least in part, to the legacy of slavery and post-Reconstruction Jim Crow laws. Health care disparities accompany economic inequality—not just for African Americans, but for all demographics. The relationships among geography, poverty, and health status were mapped as early as 1830 in the neighborhoods of Paris by French physician and public hygienist Louis-René Villermé as part of a larger effort in nineteenth-century France to analyze disease inside and outside the hospital.

Physicians, already overwhelmed with steady streams of sick patients, may fail to recognize how their patients’ most basic needs affect the success or failure of treatment. For instance, it takes more money to eat a healthy diet. Adherence to special dietary recommendations can be difficult if one lives in a “food desert,” an urban or rural area far from grocery stores stocked with fresh produce and meats. Compound this with inadequate public transportation and “compliance” can be a challenge.

Studying the history of medicine demands that we explore the systems of healing practices as interwoven with the social, political, and economic fabric of a particular age. It requires and develops critical thinking. Today’s physicians may not have the time to serve as social workers or urban geographers, but if they
think systemically and draw connections among social institutions and medical practice, they should be able to deliver more effective health care. The University of Oklahoma School of Community Medicine was recently established to train physicians to think as Villermé did: to treat the environments, communities, and poverty that contribute to disease, as well as to apply clinical skills to cure individual patients.

The history of medicine can also offer healthy doses of skepticism and humility. Take another historical example: the case of lobotomy, the surgical severing of the frontal lobes from other parts of the brain as a treatment for severe mental illness, a practice that took place in the 1940s and 1950s. Today we regard this psychosurgical technique, a procedure that sometimes killed and frequently altered the personalities of those on whom it was performed, as barbaric. And yet its originator, Portuguese neurologist Antonio Egas Moniz, received the Nobel Prize in Medicine in 1949 for introducing this type of surgery to Western medicine. Lobotomy was adopted and adapted widely in the U.S., where an estimated 40,000 surgeries were performed on psychiatric patients.

Understanding the popularity of lobotomy requires us to appreciate the horrendous circumstances in mental hospitals across the United States in the 1930s through the 1950s. They were overcrowded dustbins of humanity. Patients checked in, but they didn’t check out. Rarely was one’s mental status improved by a visit to a mid-twentieth-century state hospital. Within this context, lobotomy was a therapy of last resort, offering people with severe mental illness the opportunity to leave the “asylum” and live at home. In fact, lobotomy was just one of several heroic organic therapies that offered psychiatrists and their patients hope of resolving mental illness in a manageable, if not wholly satisfactory, way. Electroconvulsive shock therapy (still used today as a therapy of last resort), malarial therapy, and insulin-shock therapy were others in the years before anti-psychotic medications came on the scene and facilitated the de-institutionalization of mental patients across the country.

The case of lobotomy reminds us not only of the progress psychiatry has made over the past sixty years but also that specific historical circumstances may make some therapies, particularly risky ones, appear reasonable. Because I have faith in medicine and medical research, I can envision a day when people look back on chemotherapy and radiation treatments in much the same way we view lobotomy today. Students of the future may ask incredulously: “You mean doctors willingly poisoned their patients with derivatives of mustard gas, and purposefully exposed patients to high doses of radiation to heal them? And cancer patients were willing to risk radiation burns, ‘chemo brain,’ depressed immune systems, infertility, painful neurological symptoms, and secondary tumors to be cured of the disease?”

Desperate times require desperate measures.

The history of medicine encourages us to regard our own practices as our forebears regarded theirs: The best that we have available—no better, no worse. As I remind my students, there is no “stupid period” of history. We save life, something as close to perfection as we may ever know, through imperfect means. This is an important, sobering message about the nature of medicine—and one that is easy to forget when golden-hued ads for drugs that will restore our health, youth, and sex lives are peddled like automobiles on the evening news, and cancer centers promise cures through the glowing testimonials of vigorous-looking survivors climbing Mount Rainier or paddling in the Florida Everglades.

One of my history of medicine colleagues at Princeton University observes that, from the Earth, the Moon looks like a perfect sphere. When we get closer to the Moon, however, we see that it is anything but smooth and perfectly shaped. He views history as one way of taking a similar “up-close” look at medicine, of getting to know it better. Only by seeing the varied terrain of the moon can we begin to understand it as a celestial body. Only by taking a closely calibrated view of medicine—by seeing it as it is, rather than how we imagine it to be—can we engage the healing professions most effectively.

History offers one means of understanding medicine. By examining the trajectory that medicine has taken over the centuries, by appreciating the contingency of that path—dependent upon generations of well-intentioned, if imperfect, humans—we may come to know and appreciate medicine as it was, is, and may be in the future.

That knowledge is every bit as important as organic chemistry.

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EXTRA! Link to discussion questions, readings, and information on the history of medicine, food deserts, and the medical humanities at: okhumanities.org/extra