Life is no brief candle to me. It is a sort of splendid torch which I have got a hold of for the moment, and I want to make it burn as brightly as possible before handing it on to future generations.

—George Bernard Shaw

Although I have written before about the dearth of physicians now undertaking a career in clinical investigation, much of my evidence was anecdotal. Recently, however, the Association of American Medical Colleges surveyed 837 clinical department chairs to determine the number of junior physician–clinical investigators (i.e., assistant professors) in their departments, the number of vacancies, and the rate of success in filling them. More than 70 percent had vacancies (2,100 total), and a third went unfilled.

This is happening just as the opportunities for clinical research have grown to unprecedented proportions. We have new insight into human biology and the root causes of disease in the wake of the Human Genome and Human Proteome Projects and as a consequence of imaging techniques and computational methods that border on science fiction.

For many reasons (e.g., insurance, access, and cost), too few of these awesome advances are reaching patients. But one of the most striking reasons is the growing paucity of clinical scientists charged with developing evidence, in direct interactions with patients, for the safety and efficacy of clinical advances. Why is this unique breed of researcher disappearing at a time when the need is so pronounced?

First, we live in a harsh time: With federal support so constrained, funding for research of any sort has become sparse and unpredictable; the regulatory environment for patient research has become overbearing; and most graduates will confront a debt for tuition and living expenses of almost $250,000 by the time they complete their residencies. Even when graduates do embark on a career in research, unless they have abundant support and protected time, they will not be competitive for grants, and the pipeline will ultimately leak.

There also have been dramatic changes in medical student demographics, e.g., half of all students are now women. Both young female and male physicians are now more focused than ever on the balance of work and life, notably the demands of starting families (all good, in and of itself). And even those graduates whose innate curiosity about the human condition provokes their interest in research must be rigorously trained in research methods and have superior role models and mentors. All too few institutions offer such a structured environment.

Our own institution is among the very few that are relatively privileged with respect to financial resources and commitment to clinical research training. We are taking full advantage of that largesse, but it’s far from enough. As with so many other daunting and durable challenges that our country faces, it is the young who will be most affected. At the same time, that generation has the creativity, commitment, and intellectual energy to address these challenges. My hope is that our nation’s future leadership will deeply engage and inspire our young to rise to the occasion; for us, at the least, that occasion must be a life in clinical investigation.