msJAMA | April 7, 1999

Historical Perspective of Medical Residency Training: 50 Years of Changes FREE

Eric J. Cassell, MD

JAMA. 1999;281(13):1231. doi:10.1001/jama.281.13.1231-JMS0407-6-1.

In the current medical era it may be difficult to imagine a time when optimism reigned in medicine, interns and residents loved their work, and the public held physicians in high esteem. This was the atmosphere in which I started my internship in July 1954.

World War II was over and prosperity and optimism marked the mood of the nation. Medical science received a big boost because of its achievements during the war, and the public at large had begun the romance with science that has continued to the present time. Physicians' authority was generally accepted and arose from their command of medical science and knowledge of disease. Physicians prided themselves on the fact that they made the decisions for their patients, and by and large patients respected their doctors and did what they were told.

We thought of ourselves as being at the acme of medical progress, yet the era of technological revolution in medicine and the era of therapeutic efficacy was just beginning. There were no intensive care units; cardiac, pulmonary, or renal resuscitation did not exist. Cardiac catheterization had just started and cardiac surgery was in its infancy. As an example of the state of the art, in 1954 one of my patients was to be treated experimentally with intravenous

streptokinase for his recent "coronary thrombosis." He was a derelict with no family and from whom no permission was obtained. We were to monitor his progress by ECG every few minutes —I made the electrodes from quarters (silver at the time). After a few hours the experiment was stopped out of fear for the patient because of frequent ventricular premature beats. No one had ever seen anyone's continuous ECG.

While we generally loved the work and were enthusiastic and optimistic, interns were on call on alternate nights and residents every third. We complained about the amount of scut work — interns or medical students did complete blood cell counts and urine analyses and were the patient transport system much of the time. Bellevue Hospital, where I trained, was grossly understaffed and in poor condition. House staff made up for many of the deficiencies. With few exceptions, the patients were on 30-bed wards that were full in the beginning of my training but less so by 1958 as hospital insurance began to have an impact. Despite the pay ($25 per month for an intern), the amount of work, and the poor physical environment, morale was usually high. We thought of ourselves as the defenders of the poor against "the system," although that phrase had not yet been coined.

Was my training different from residency training today? Superficially, absolutely yes. Fundamentally, certainly not. Think what the intervening 40 years have brought. The current economic conditions may spring to mind — more physicians, diminishing financial rewards, and the chaotic flux associated with managed care. Or consider the fantastic explosion of medical science, technology, and therapeutic power — for all of which it is difficult to find sufficient hyperbole. Hospitals are better, residents' salaries are higher, and the climate of training has changed. But training has not basically changed.

There were 3 fundamental assumptions on which our training in 1954 was based. First, if someone is ill, it was assumed that their disease adequately

explained the illness. The second assumption was that the same disease in different persons produces the same illness — it is the disease that counts. The third assumption was that to know the science of disease is to know diagnosis and treatment and to know medical science is to know medicine. Substitute the word pathophysiology for disease and these same assumptions underlie current training programs. This is a pity, because they are palpably false in today's world.

These assumptions have been invalidated by 2 enormous changes occurring over the last 40 years. Residents are still being trained by caring for patients with acute disease or acute episodes of disease, but medical practice has changed. The disease burden is overwhelmingly due to chronic disease, in which the patient's personal characteristics along with pertinent social, cultural, economic, and even political factors can be as important in determining illness occurrence and how patients are managed as the illness itself. Further, the prevention and management of disability is key in the care of those with chronic illnesses, more so than saving lives. The second major change is that patients have been moved to the center of medicine and the relative roles of physicians and patients have altered.[1]

Are residents being trained to focus on the sick or well person rather than the disease in the manner demanded by changes occurring over these past 40 years? Are the skills necessary for physicians to be for their patients a professional teacher, motivator, psychological counselor, and reliable confidant as much a part of their training as medical science? If not, residents are probably being trained for the medicine of a generation past.

ARTICLE INFORMATION

Submissions for the 1999 Frank Netter Arts Contest for Medical Students must be received by May 24, 1999. Complete information is available online at *http://www.ama-assn.org/msjama*. Additional inquiries may be directed to Patricia Wong, *MSJAMA* Art Editor, at pwong@leland.stanford.edu or (650) 497-1576.

REFERENCES

1 Cassell E Teaching the fundamentals of primary care: a point of view. *Milbank Mem Q.* 1995;73373- 405
Link to Article