COMMENCEMENT ADDRESS

University of Southern California School of Medicine

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I am honored by your kind invitation to participate in these Commencement exercises. At the same time, I appreciate that you may be more than preoccupied with other matters such as the receipt of a degree and acquisition of the legitimate status and title of Doctor of Medicine. As I considered what memorable pearls of wisdom I could possibly convey, I tried to recall what was said by the Commencement speaker when I graduated. I was chagrined that I really had no recollection of what he said or for that matter whether there even was a Commencement speaker. Thus, with an element of humility, I have kept in mind the young Dean of Canterbury who was approached by the Lord Chamberlain prior to giving his inaugural sermon. The Lord Chamberlain explained that the Queen would be attending and wished in advance to know something about the sermon. The Dean queried anxiously if there was some subject about which the Queen would like him to speak. The Chamberlain replied that the Queen hadn't the slightest interest in the subject matter - only the length of the sermon - which had best be brief.

I'm sure, or at least I hope, it is obvious to you that the scope of medicine and medical knowledge extends far beyond the basic core of knowledge to which you have been exposed in the brief span of four years. At the same time, our knowledge base in medicine continues to expand logarythmically. This day, in perspective, must thus be viewed as but a milestone in a lifelong process of education in the understanding of patient, of disease and of health.

If your experience was like my own, and I gather it is today not all that different, your concern inevitably has focused primarily on the individual illness, not the patient, and what had to be done next - whether the serum cauliflower level was important to determine, whether it was right heart or left heart failure and whether it made any difference anyhow or whether the little brat was convulsing or having a temper tantrum.

Sometimes the cases even had names, and were not always referred to, for example, as the Stevens-Johnson syndrome in room 20. During medical school, there is inevitably a preoccupation with the vast amount to be learned and/or memorized. There is an inherent and continuing element of anxiety in the realization that in only weeks or months, the decision you alone might make could mean life or death to an individual. In this environment, it is understandably difficult to think of the individual except as a case - to think of the individual as part of a family, let alone a community. In the milieu of a medical school, future aspirations tend to focus on the classic specialties to which one is exposed within the temples of high technology - surgery, medicine, pediatrics, etc. Only as one moves through internship and residency does the realization begin to dawn that so many of the cases one sees are commonplace, garden-variety illnesses subject to straightforward therapy, that the esoterica which are epidemic in a

teaching hospital are rare to all but nonexistent and that so many previously challenging emergencies can be dealt with almost by rote. However, until you reach this point, I would strongly urge that you keep your options open as to your future career. My own entree into epidemiology and public health was quite accidental and such could be said of many of my colleagues.

To me, in medical school, public health as I saw it had something to do with latrines, the chlorination of water and bureaucracies. None of that nonsense for me, of that I was certain. I would be an internist - a cardiologist, to be more precise, undoubtedly bearing the distinction of an off-beat sort of stethoscope which would protrude subtly but ostentatiously from a white coat.

At the time I graduated however, we had something called the "draft". The choice, as we saw it, was to decide whether one wanted to do routine induction physicals in the Army, Navy or Air Force. The Public Health Service and the Communicable Disease Center were little known. One February day, a recruiting officer from the Center came to the hospital where I interned and inquired about possible interest in signing on to satisfy military duty. Frankly, I had little interest in communicable diseases. The rashes never looked at all like they were described and the incubation periods were impossible for me to keep straight. Besides, most such cases occurred in squalling kids who could give no history and possessed impossibly small veins in extremities which were in perpetual motion. Draft duty at CDC looked better but only marginally better than a military induction station.

Our two-year tour of duty began with a six-week course in epidemiology and the note that at the end of that six weeks, we would be certified as expert epidemiologists qualified to deal with any epidemic. Wherever assigned, we were on 24 hour call, on standby to proceed at a moment's notice to the scene of an epidemic of anything anywhere - to investigate it, to advise as to what should be done and to assist in controlling it. Interest in the course was, I suppose, analogous to a medical corpsman undergoing a six-week course in surgery with the expectation that he would be able to deal with anything from an inflamed appendix to a ruptured gall bladder.

The real world proved no disappointment. I well recall the day I was ordered to fly immediately to Argentina to deal with an outbreak of more than 200 reported cases of botulism of which 12 or 14 had already died and others were dying. I was told that an expensive restaurant was the suspect source and a riot had occurred when a mob endeavored to burn the restaurant. I had little more than a vague recollection of the signs and symptoms of the disease and recalled little of the bacteriology of the Clostridia. Per standard practise, I immediately raided every reprint file in the Section, read and reread reprints all the way to Buenos Aires and mastered a fifty work Spanish vocabulary in the process. (<u>This</u> is what I mean by the need for continuing education.) At the airport, the expert from out of town was met by a horde of newsmen and photographers and rapidly transported to the scene. But, in the end, all worked out. With a fifty word Spanish vocabulary and bad college German, we sorted out the source (pimientos), ascertained that the risk was at an end (Epidemiologists classicly arrive at this point). We started anaerobic cultures and by mouse testing proved the epidemic to be due to a type B strain.

Epidemiology took me from rural Alabama to urban slums in Chicago, from thatched huts and the blue Pacific of Polynesia to the most densely crowded slums of a famine-stricken Dacca. It was constant adventure but, in the process, I learned the obvious - that illnesses did not occur and could not adequately be dealt with one by one as names on an appointment calendar in an antiseptic office. I'm sorry to say that my temporary return to medicine as a medical resident was a dull disaster - a steady flow of patients each recounting a litany of problems - difficulty breathing and a bit of ankle swelling, a chronic bursitis in the elbow, a touch of constipation. The patients again quickly became faceless, nameless, detached illnesses. It was like turning in a three dimensional color television for a portable black and white. So back to epidemiology - and eventually to smallpox eradication. For me, it is impossible to convey in words the satisfaction of having been part of a team that decreased smallpox morbidity and mortality from ten million cases and two million deaths to '0' in ten years time.

I would not for a moment propose that each of you take up epidemiology or public health but I would suggest that the shape and direction of the practise of medicine is changing and you can and must play a role in the medicine of tomorrow, in the practise of medicine in the community. You may choose to regard the future as a threat or a challenge. The practise of medicine, since its earliest days, has been and still largely continues to be most closely akin to that of the art of the medieval craftsman. Most physicians continue to perceive themselves, wittingly or unwittingly, as artisans to which is presented an ailing gall bladder, a failing pump or a broken arm - each to be considered, individually repaired and paid for - akin to skilled mechanics fixing broken axles rather than filling a pot hole in the road.

Alien to most in the practise of medicine is the perception that the community might more properly be the patient than the individual. That the physician's responsibility might be the health of the community rather than the sickness of individuals. This implies a change in medical practise. It implies involvement in the community, in community affairs, in the development of health programs for prevention and sickness care. It means the development of a practise in which the physician serves as the responsible authority for a team of persons responsible for assuring the health of a community. I'm sure that this today sounds utopian - and alien - to what you have seen and what you have done in the hospital setting. However, never before has the existing practise of medicine been challenged as it is today. John Knowles summed it up well in the title of his book "Getting Better and Feeling Worse". 180 billion dollars, nine percent of our gross national product, is being spent on health care; more than $1 billion alone on end stage renal care - not prevention, not treatment, simply maintenance. Less than two percent is spent on prevention. And the available technology is becoming more complex. And more physicians are becoming available to use the technology. In twelve years, there will be more than fifty percent more physicians in practise than there are today. And, all the time, a continuing hue and cry about escalating costs of medical care.

A grim future - you've sweated blood for these many years and look what's ahead. That's one way of looking at it - if you wish to practise medicine as have your fathers and your grandfathers and they before them. But at the moment of apparent crisis, there is opportunity for change - for redefining the role of medicine from that of a group of individual physicians providing sickness care to individuals to that of a team providing health care to the community. To do so, you must know the community and be involved with it, its programs, its policies and its functions. This may not be medicine as you have seen it nor call for activities for which you have now been trained, but as an old shoe-leather epidemiologist, may I say that this approach can add another dimension to one's life and to one's patients.

The moral is more poignantly stated in the story of the British Airways pilot who found he was running out of fuel over the Atlantic. He switched on the intercom and announced "This is your pilot speaking. I regret to inform you that we seem to be running a bit low on petrol and will be landing rather short of the runway, perhaps ten miles off the Coast. This is, after all, an economy flight. After we set down in the water, those of you who can swim should immediately proceed west toward the setting sun. For those of you who cannot swim, may I say 'Thanks for flying British Airways'". To you who are swimmers or learn to do so, "bon voyage". The water's bracing. To those who decide that swimming is out of the question, I greatly fear the seat cushions may not remain bouyant for long.