

A Cardiologist's View of Cardiology, Past and Future

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I entered medical school in 1959 and graduated in 1963. As a guide to future developments in my field, I would like to first examine the advances that occurred in the short period of between 1959 and the present. It is hard to believe that when I entered medical school we had no developed implantable pacemakers. Cardiac catheterization was possible, but no one had dared to attempt coronary angiography. That how ubiquitous procedure was first published in 1962. The first coronary bypass operation occurred around 1967. Coronary angioplasty became popular around 1980. Heart transplantation, electrical cardioversion, and modern cardiopulmonary resuscitation have also been developed and applied only recently. Concepts about heart rhythm disturbances, coronary atherosclerosis, and hypertension have advanced tremendously. Very few cardiac drugs used in 1959 are still in use today.

It is said that the half-life of a fact or practice in medicine is only seven years; that is to say that one half of what we do and know today will be outdated or discarded within seven years!

We now live in a transitional period in cardiology. So much of what we do is driven by economics. We have an HMO system, which was intended to foster excellent medical care for less money. We have found it necessary to add all sorts of regulations, which modify its effectiveness. A recent example is that women may remain in the hospital for only one day after childbirth. There may well be more restrictions on number of hospital stays in coming years. A number of states have passed legislation permitting lawsuits against HMOs. There is talk of similar national laws.

So much of the research we do in the U.S. is supported by drug and device manufacturing companies. We have these massive clinical trials with catchy titles such as "ALLHAD" (Antihypertensive and Lipid Lowering Treatment to Prevent Heart Attack) and "BEST" (Beta-Blocker Evaluation of Survival Test). We recently have been told that many authors of papers in one of our most renowned medical journals either failed to disclose their economic ties to the companies which manufactured the drug or device, or that the journal failed to disclose these connections in the published report. Most of us in the field have some difficulties with the conflicts of interest contained in many clinical papers.

Along with these current problems, we also are witnessing an explosion in the depth of our knowledge about mechanisms of disease. Take for instance the human genome project, where we will soon be able to identify most of the genes that make up humankind. Of course there are many mutations, which cause disease. Perhaps my most wishful thoughts are that we may be able to alter these mutations and thus eliminate the problems they cause. I predict that we will also be successful in altering the gene code makeup to modify such genetic-related diseases as coronary disease, diabetes, and cancer. Such experiments are already under way in their most rudimentary form. We now know more about mechanisms of atherosclerosis and myocardial infarction. We will develop better methods of prevention and treatment. In the near future, we will have noninvasive diagnostic techniques, which will render diagnostic invasive cardiac catheterization and coronary angiography unnecessary. Pharmacologic advancements will occur at a rapid pace. Perhaps we will be able to treat atherosclerotic plaques directly with drugs. Even now, we are beginning to talk about congestive heart failure as an endocrinological pathologic process and are treating it accordingly. The development of the purely mechanical heart will supplant heart transplantation. Treatment for aneurysms ("weak" outpocketings of arterial vessel walls) is moving from major open surgery to stenting devices inserted on catheters via the artery in the groin.

So much for the science. It appears that we are not allocating resources to the humanistic side of medical care. Science does not replace the time needed for professionals to allay the anxiety that people feel when they are afflicted with illness. I have seen the look of terror on the faces of patients and their families when confronted with a serious diagnosis or the need for a diagnostic procedure or surgery. My greatest fear for the future is that no one will have the time nor the inclination to explain or discuss a disease with the patient and be at his or her side when most needed. I

have utmost confidence in the skill of health care professionals today or in the future to take care of diseases, but I remain concerned.

Perhaps one of the reasons that we are all gathered here is to ensure we attend to people and patients, not only their diseases. As I have said many times in class at Hebrew Union College, I believe that the future of medical care delivery must include an expanded direct role for clergy not only in traditional visitation but also in liaison between doctors and patients and their families. The same is true for the need for social workers, and other support networks. It is unlikely that organizations such as drug companies or even the National Institute of Health will monetarily support this aspect of patient care. It is schools such as yours, which will supply the medically sophisticated clergy, social workers, and communal professionals who will visit patients and function as patient advocates. Serious illness is a devastating and lonely experience. With your direct participation in the health care process, you will improve the lives of all of us.