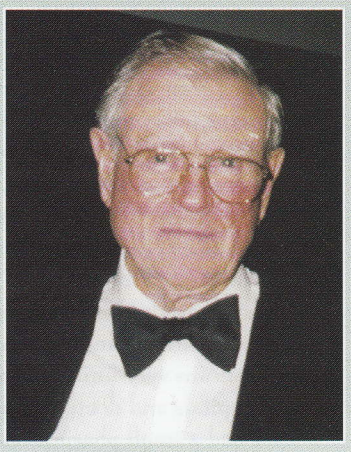
An Interview with Mavis P. Kelsey, MD

Interviewer: William H. Kellar, PhD, from the Center for Public History at the University of Houston

Date: July 19, 2004



Courtesy Mavis P. Kelsey, MD

WHK: Let's start by talking about changes in medicine over time.

MPK: Well, my life span covers the days from the horse and buggy doctor to the high degree of technology we have today. My grandfather was a doctor and I rode in the buggy with him on house calls in the early 1900s. I watched the development of antibiotics, which was one of the most dramatic changes in medicine that occurred in the late 1930s and the early 1940s. The first one was the sulfa drugs. And then, Sir Alexander Fleming developed penicillin, which was used in World War II, and the antibiotic treatment for infections expanded to be a major part of medicine today and saved millions and millions of lives. One of the ironic things about it is that here is a great discovery—the antibiotics—and over time, bacteria have developed a resistance to antibiotics. And now, they have to try to find new antibiotics all over again.

I was at a drug store the other day and they showed me a package for the latest antibiotic. This packet was $750 for about a four to five day treatment. I thought it was mighty expensive when I went over there to get some pills that cost about $10 to $20 a piece. They put me in my place right away when they showed me this packet for $750!

There is no telling what will happen to the expense of medical care, which has increased dramatically in the past 75 years, especially in the last 25 years. For example, medication and the diagnostic tests that are so important and so necessary are extremely expensive and have

Located just outside the Medical Center, the brand new, 250,000 square foot Kelsey-Seybold Clinic, Main Campus Building, opened in 1999. Photograph by Tom Fox, Courtesy The SWA Group

raised the cost of medical care. People cannot be deprived of these advances in medicine, even when they cannot pay for them. This puts pressure on the cost of health insurance, which has gone from $100 or so a year for families, to now, I just recently saw that health care would be up to $15,000 a year per family, and still not cover everything.

One reason that there was not much need for insurance and the like was because it was very limited what people, even hospitals and doctors could do. A doctor had a small pharmacopoeia of medicines or a small bit of surgery he could do, and it was not very expensive. An obstetrician, the same. So, the medical bills were not always that bad. There was more charity because we did not have a lot of expensive things that could run up a tremendous expense that the taxpayer did not want to pay for in charity. All they had to pay for was a doctor's office and the doctors did a lot of charity work. They still do, but not like they used to. Many doctors spent at least one day a week doing charity. I know I have spent many, many days doing charity work for no pay whatsoever and a lot of people spent a lot more time than I did. And you had a certain number of patients that came through your office. You knew they were charity. You did not even bother them. You would save money by not sending bills. You just took care of them.

We made house calls. Now, we send people to the hospital or to some emergency room somewhere. It would be a lot cheaper if we could do house calls, but that is a thing of the past. One reason house calls are not so successful is because we always want to do some of these elaborate, expensive tests on a patient. We quit doing good physical diagnosis, taking good histories. We could learn so much by taking a good history and doing a good physical examination, and we had to depend on those things. Now that we do not have to depend on those things, we have let them slide. We short cut it because we know an MRI, which costs $2,000 or $3,000 maybe and a trip to the hospital, will give you a lot more information than you get from a history and physical. So, that runs up the cost of medicine and it is getting more expensive all the time. They are developing equipment that is extremely expensive—costs in the millions of dollars. And when they become available, everyone is going to demand it regardless of what their financial status is and I guess they probably maybe have a right to it, but someone has got to pay for it.

Mavis P. Kelsey, The University of Texas Medical Branch graduate, 1936.

Another advance in medicine was the development of the radioisotopes. At the end of World War II, I returned to the Mayo Clinic and they had just introduced the use of radioiodine for treatment and diagnosis in thyroid disease. This was the first radioactive isotope to be used in medicine. We were experimenting with it at the Mayo Clinic when I came there and was assigned to that department. I took part in a lot of the early research in it. We used ourselves as subjects, not knowing the amount of radiation that would be harmful. I do not know what happened to the others doing the research, but it destroyed my thyroid and I have had to take thyroid medicine the rest of my life. And I am probably lucky that I did not get thyroid cancer, because a small amount of radiation can lead to thyroid cancer. Since then, there are literally hundreds of different treatments with isotopes and literally hundreds of tests using isotopes, and they are used widely in research and medicine. Of course, they are used all over the whole economy and different manufacturing and many other things.

Cobalt-60 irradiator. Courtesy McGovern Historical Collections, Houston Academy of Medicine-Texas Medical Center Library

When I was young and early in my practice, cancer, once diagnosed, was considered virtually incurable. If they could remove it surgically, that could be done. By the late 1940s or early 1950s, they were using radium inserts for treatment of cancer, especially cancer of the cervix, and they had some success with that treatment and x-ray treatments. This was the beginning of various kinds of radiation.

When I got to Houston in 1949, the cobalt-60 machine was being built and installed at M. D. Anderson Hospital. I believe that was the first one in the world. And since that time, numerous radiation therapies based on isotopes are widespread in use today.

When I joined the staff of the M. D. Anderson Hospital in 1949, there was no specialty known as oncology. It was only a few years later that there were people who specialized entirely in cancer. Even though there were cancer hospitals, there was no one that had been trained specifically in oncology or the whole clinical treatment/specialty of cancer diagnosis and treatment. As a matter of fact, there were not any treatments for it except for those I mentioned before—early surgery and some radiation. Most cancers we found, internal cancers, were already inoperable when we found them. We did not tell patients they had cancer because we knew they were going to die. We made some kind of lame excuses for diagnosis. But I think most patients realized they had cancer and did not push the subject of the diagnosis.

I mentioned oncology and I am thinking about chemotherapy. The earliest chemotherapy began in the 1940s, late 1940s or early 1950s. It started when they found that nitrogen mustard drugs had an anti-carcinoma effect and the field has expanded from that. There are literally hundreds of new cancer drugs. Some of them have been extracted from plants. Many of them have been synthesized.

The M. D. Anderson Cancer Hospital, which was in temporary quarters when I arrived in Houston, was on Baldwin Street at "the Oaks," the old Baker residence. Dr. R. Lee Clark was the newly appointed director of the hospital. Since then, they have built a hospital in the Medical Center which is today, I believe, the largest cancer hospital in the world right here in Houston, along with the Medical Center, which is also said to be the largest medical center in the world.

Another important advance which is so dramatic is the use of hormones, especially treatment with the corticoadrenal hormone, adrenal steroid hormone, cortisone. This was one of the major advances in medicine. I know that Dr. Philip Hench at the Mayo Clinic first gave cortisone to patients with rheumatoid arthritis and they had remarkable improvement. But they found out the side effects from large doses of cortisone were harmful. But meanwhile, through the years, they developed many corticosteroid drugs which, when properly used, have been a great advance in medicine. And other drugs have been developed that are of a similar nature for treatment of arthritis and many diseases.

WHK: What do you think about the tendency towards increased specialization in medicine as opposed to the family practitioner?

MPK: The knowledge of medicine has expanded to such degree that no doctor can be a Renaissance Man, so to speak, and know all there is to know about medicine. The result has been specialization. There has been specialization for a long time but even those specialists had to have general training. But now, medicine represents such a vast field of knowledge that doctors have to divide their interests. There is still a place for the general practitioner who can take care of the usual events, health events, that people have, and can refer them to proper specialists when the time comes to do so.

When the specialists, starting in the 1950s and 1960s, started taking over medicine, the general practitioners fell way behind and their status was declining. Now, we have begun to realize the importance of having the people who do general practice, which today is different from general practice 100 years ago or even 75 years ago. Back then, a general practitioner tried to do all kinds of surgery; for gallbladders, appendix, thyroid while also delivering babies and doing general obstetrics, and being a psychiatrist and all. Today, they call this form of medicine primary care. And these doctors doing primary care usually do not do any surgery except for the very most minor things and seeing their patients.

When I started in practice, I did practically everything in medicine except major surgery while I was in the Air Force up at the Aleutian Isles during World War II. There were not any women there so I did not deliver any babies.

Now, the board of certification is another advance. When I first graduated from medical school, there were no boards for certification. And now, probably several dozen boards certify physicians for different specialties: internal medicine, all the branches of internal medicine and the subspecialties. The same is true for surgery, neurology, and psychiatry. And this has been a great help for medicine because we have raised the standards of practice by having these boards, which certify doctors to be qualified.

WHK: Could you comment a little about space medicine? We have gone from the horse and buggy to being able to have medicine for astronauts in space.

MPK: When they first started flying airplanes, we realized that the human body was subject to many changes from gravity, low oxygen at high altitudes, ear, nose, and throat symptoms from low atmospheric pressure. The specialty developed. It was first called aviation medicine. Now, we have the space program and there are many different challenges for people who travel in space and the whole system has now been called space medicine. And one of the most important things is the effect of the loss of gravity, which has caused innumerable changes in the human physiology. The space program is limited, of course, to very few doctors because the space program is such an expensive program with only a few space ships in action all over the world. However, a lot of doctors want to get into it but there is just not room for many of them. There are a lot of advances that have to be carried out in space medicine and the future of space medicine, the future of space travel and all, is yet to be determined.

WHK: Did you think in the 1940s and early 1950s that a cure would be found for cancer within, say, a decade or so, especially after M. D. Anderson opened?

MPK: Well, people have always searched for a cure for cancer. At first, the idea was that there would be one cure that would be found and, as time went on, we found out that there are many different types of cancer, many different causes of cancer, so this business of finding one cure for cancer has been relegated to the trash pile. We now are trying to find cures for the several hundred different cancers or varieties of cancer. The treatment for one is totally different than the treatment for another. So, the constant search for curing cancer goes in many, many lines—hundreds of different lines. Hematology—diseases of the blood. Neurology—cancer of the brain. Cancer of the gastrointestinal tract. These all have different causes.

We also have a lot more interest in preventing cancer today. We know, for example, a lot about the causes of cancer. We know that many environmental factors are causing cancer. At one time, we did not have any idea about the cause of cancer. We just said, the cause of cancer is unknown, and no one even expected to find a cause for cancer or causes for cancer like we found today. We continue to discover drugs and habits and foods and other things that influence the development of cancer or even the cure of cancer or the prevention of cancer. It has opened up a wide field of research, a wide field of treatment that I think no one ever suspected when I came to Houston in 1949.

WHK: What about some of these diseases that seem to be new diseases like AIDS or things like this SARS virus?

MPK: We have discovered new diseases. There had been a time when numerous birth defects, hereditary diseases, were all lumped together. We began to break down and find out these dozens of different diseases—many of them genetic in origin and hereditary—are due to mutations in the line. We also have new diseases from infectious origin that we did not have before. For example, AIDS—Acquired Immunodeficiency Syndrome. I can remember when the first one of these diseases was pointed out and at that time, we

Continued on page 55

thought that this was a limited number of cases. There are some of those first AIDS diseases that were not related to the AIDS virus, and we thought that was all we would find. But we had discovered what AIDS was. And then, all of a sudden, we began to see it spreading around and we found out that it is also being caused by a virus and this started to overwhelm us because a virus infection, the HIV virus, started spreading and we started learning more about it.

It really overwhelmed the medical system. It is still overwhelming it. There are millions of people with it. We still have not found a cure for it. The virus apparently alters itself and is very hard to control and, as everyone knows, there are certain parts of the world—Africa and Asia, for example—where millions of people are now ill with AIDS. And in this country, we have treatments that reduce the seriousness of the disease and let people live a lot longer and probably not spread the disease as much. And we have, to some degree, some control of AIDS in this country.

For the world in general, it is still a runaway situation. Some people think that AIDS came about when some people were exposed by some way to a virus that involved apes or monkeys or something that got into man. Other people believe and I believe that AIDS is an ancient disease of humans. I think it has occurred repeatedly in the history of the world. When you study the different epidemics in the world, some of them fit very well with AIDS. Then, they would finally run their course. Let's hope that that will be what will happen with AIDS. At least, if we cannot find a cure for it, we had better hope that it is a virus that will run its course.

WHK: In your long career, is there something that you find now, as you look back, that maybe was the biggest surprise to you in medicine?

MPK: I have been asked that question before in different ways. I cannot answer it because I cannot say one thing that is more dramatic than others. I think probably the thing that has been the most dramatic for saving lives is the advent of the antibiotics.

Another great thing that has happened is vascular surgery. I can remember that during my medical education, especially in surgery, the professors would talk about things that we could never do anything about. And one of them was the heart. They said, "Nobody is ever going to be able to operate on the heart. It is in constant motion and you cannot do anything about it." They were curing stab wounds if it was not too bad and it did not have too much blood loss and shock. Surgeons, many times, would go in and sew up stab wounds while the heart was pulsating. As a matter of fact, I saw Dr. Albert Singleton do that in Galveston while I was a medical student. People thought that would be the limit of heart surgery. But we all know what has happened since then. We have been able to have artificial circulation and also bring the heart to a stop and do surgery on it and repair arteries or even repair the muscular structure or valve problems, and have the heart beating again, restore the circulation. There have been literally millions of people operated on. When I was in medical school, this was said to be impossible. I remember some doctor saying we had reached the limit of what we could do in surgery. This has turned out to be totally untrue. We keep developing things every day that we could not do before. I am not a surgeon, and things have advanced so much that I am not very well qualified to tell you much about it.

New technology has also brought many changes. Now they are doing virtual surgery, they call it. They are doing remote surgery. They are manipulating a view they have on a screen to operate on the patient. And they are not even at the patient's bed. A robot is doing the surgery, in a sense that they are controlling it with the hands on a panel or something like a computer panel and doing surgery. Apparently, some surgery done that way is a lot more effective because they operate using small incisions, so there is less morbidity and less time for recovery.

WHK: How has medical education changed?

MPK: Well, I am not in touch with medical schools like I should be, but earlier I was mentioning physical diagnosis and doing a careful examination. In medical school, they teach it but they do not have any professors that can show them how to do it. And now, they are using actors. I do not know whether you saw that recently. They hire actors to go in for medical students to examine instead of having actual patients with disease or going in with a physician who carries the medical student down the ward and picks out patients. And we are doing it on mannequins of different forms and do all kinds of examinations on them, do all kinds of treatments on them. Like, they teach people how to do emergency CPR.

All that is so much more expensive. I was told that it costs $200,000 a year per student in medical school at The University of Texas at Galveston. When we were in medical school, I know I did some research on it—the budget for the medical school in Galveston—during the depths of the Depression, during one year when I was there, was a little over one-half million dollars. I mean, $500,000 or so was the appropriation from the state to run the medical schools. Now, they are asking for billions of dollars. You can see what has happened. It is just absolutely mind boggling to see the tremendous changes that are taking place. ■

Dr. Kelsey retired from his medical practice in 1986 at age seventy-three. He had practiced medicine for fifty years and co-founded Houston's first multi-specialty clinic, the Kelsey-Seybold Clinic. He once told me that he felt that the years of his practice had also been the "golden age" of medicine. It had been a time of great advance in medical science and also a time when doctors could still do their "doctoring" based upon their patients' needs. Medicine has changed greatly since Dr. Kelsey first rode with his grandfather to make house calls. Today, with so much emphasis on technology and on the "business" of medicine, perhaps it is useful to recall the words of the famed medical educator, Sir William Osler: "The practice of medicine calls equally for the exercise of the heart and the head."