AN INTERVIEW WITH DR. MICHAEL E. DEBAKEY

BY STEPHEN P. STRICKLAND, PH.D.

ON THE OCCASION OF

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and the

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THE NATIONAL LIBRARY OF MEDICINE

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Table of Contents

Introduction and Biographical Sketch i

The National Library of Medicine and the nature of medical libraries 1

Information searches 2

- Researchers' use 2
- Doctors' use 3

Regional Medical Libraries 4

Controversy over location of NLM 5

- Senator Hill and Dr. Shannon 7
- Speaker Rayburn and the American Medical Association 7
- Dorothy Vredenburgh Bush 8
- Isador Ravdin and Chauncy Leake 10

Getting medical science information into use 11

- Physicians' understanding of diseases 13
- Public understanding of health 14
- Cooperative efforts with National Heart, Lung and Blood Institute 15

Role of NIH in reducing cardiovascular diseases 16

- Earlier positions of American Medical Association 17
- Medicare 17
- Regional medical program 19

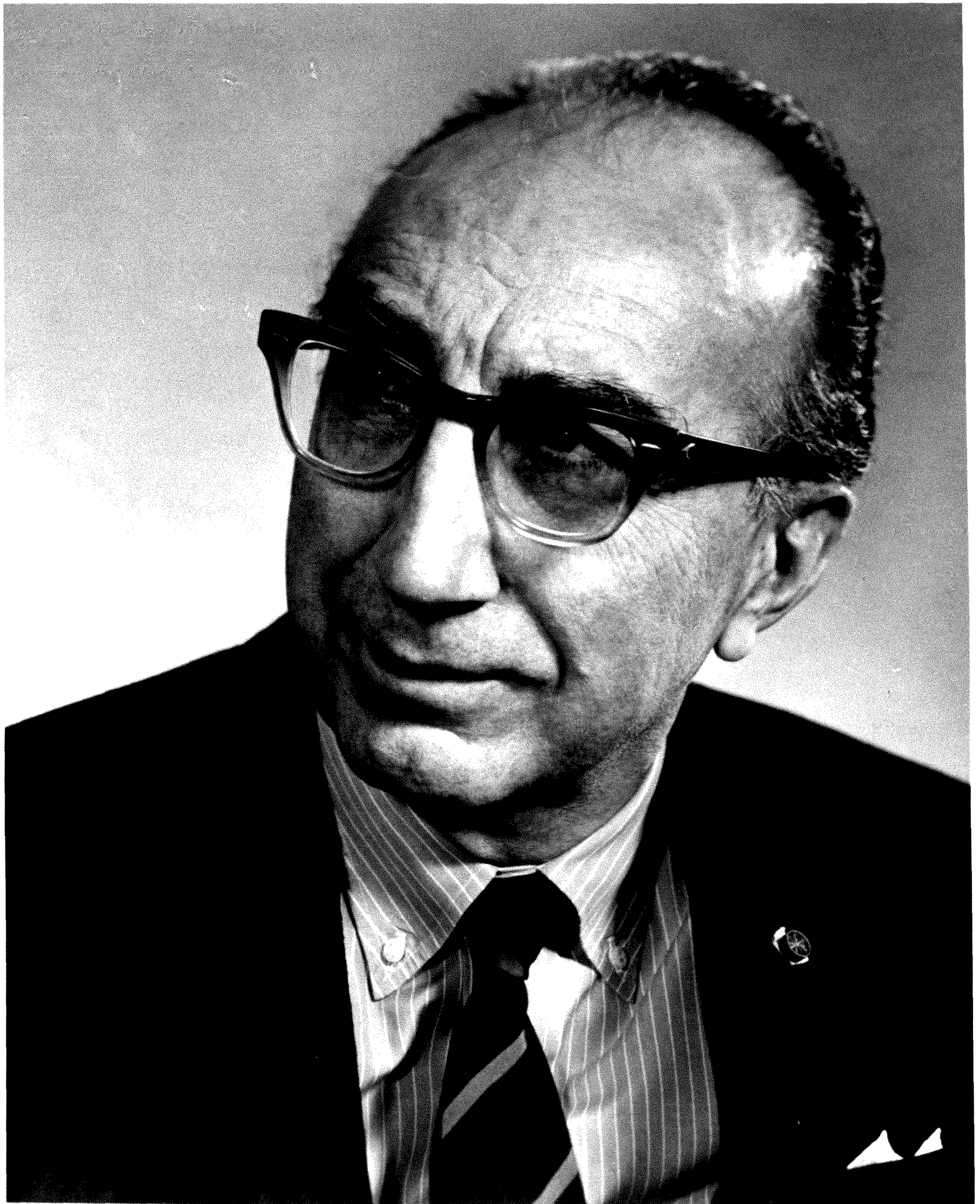
Family responsibility for health 20

Status of health knowledge and health-care delivery 22

Health care costs 22

Health care ethics 24

Dr. DeBakey's curriculum vitae



Introduction and Biographical Sketch

This interview with Dr. Michael E. DeBakey is one in a series of "oral histories" focusing primarily on the origins and development of the extramural programs -- most especially the grants programs -- of the National Institutes of Health, beginning with the establishment of the Division of Research Grants in 1946. Most of those interviewed have had critical roles in the development of the extramural programs.

The grants program constituting the largest component of the NIH, the interviews also reflect judgments and perspectives about the impact of the grants programs on health and science.

Mike DeBakey is one of the world's preeminent medical researchers, cardiovascular surgeons, medical administrators and statesmen in the field of health. From his days as a medical student, when he devised a pump which subsequently became an essential component of the heart-lung machine that made open-heart surgery possible, to his role in helping insure the establishment of the National Library of Medicine as a civilian institution attached to the National Institutes of Health, to his advancing the state of cardiovascular surgery and knowledge about cardiovascular diseases, Dr. DeBakey's contributions are myriad and pervasive.

In the course of this interview, Dr. DeBakey focuses in significant part on the struggle to build the National Library of Medicine as a civilian agency, first involving its separation from the military services and, later, the struggle over where the NLM should physically be located. Dr. DeBakey's skills as a political negotiator, illustrated in this interview, reflect not only an intelligence and tenacity unusual for medical researchers and practitioners, but a thoughtful, even philosophical basis for his actions.

Also in the course of the interview, Dr. DeBakey talks about the role of the National Institutes of Health in advancements against major diseases, and about the changing perceptions and assumptions of responsibility for health care on the part of an ever-widening and ever more knowledgeable public. In all of this, the role of the National Library of Medicine, regional medical libraries, and medical libraries system throughout the country, are highlighted.

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WASHINGTON, D.C.

Interview with Dr. Michael DeBakey,
Baylor College of Medicine
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SS: I am talking this afternoon here in Houston to a very distinguished surgeon, researcher, physician, and institution builder, Dr. Michael DeBakey. We are talking on this occasion about the National Library of Medicine and the National Institutes of Health. The National Library of Medicine, this year, 1986, will celebrate its 150th anniversary. By the way, there's a little question as to exactly when the Library started, but it's generally recorded from the first time the Surgeon General of the Army started collecting books, and that's 1836. Dr. DeBakey, I simply wanted to get your perspective, which is a special perspective in a certain way, on the role of the National Library of Medicine in American medicine and health.

MD: Its role is broader than just American medicine. The National Library of Medicine has become the international library of medicine. It has become the library of medicine for the entire world. Medical researchers are aware of its function, but most people don't appreciate its significance in medical science and in medical activities in general, including medical practice. There is still a certain false impression about libraries in the minds of people -- and that includes doctors -- that libraries are warehouses for books. They seem unaware that libraries have taken on an active role; they consider their role to be passive. That comes to some extent from our upbringing. We think of our public library as a place where you can go to find a book. But, today, the medical library in any institution -- to a large extent as a consequence of the activities of the National Library of Medicine -- now plays a much more active role in the intellectual, scientific, investigative activities of that institution. Consider an institution such as ours; we'd be lost without the library. It plays an integral role in all our activities.

SS: I looked at some recent figures, and in 1985 there were something like three million "searches" for information about particular disease problems or health problems or medical procedures made at the Library of Medicine through the automated system.

MD: That doesn't include some searches made at the various regional libraries and institutional libraries.

SS: Would you explain or illustrate exactly how this works? In other words, what kind of a medical situation would come up that would prompt an inquiry or a search?

MD: Almost any kind of research project that is being initiated requires a library search first. The investigator goes to the library or to the librarian and seeks whatever publications are available on a particular subject. That's one of the first things you have to do, because you must find out the present state of knowledge before you can hope to add to it. That, in fact, may lead the investigator to a different route, which, in turn, may lead him to the library again to seek information about a different medical or scientific subject. The search for new knowledge is a constantly evolving process in which the search for information stimulates further developments. Library research usually directs the investigator into a more fruitful path than if he had blindly gone forward with something he may have thought about only superficially.

SS: Would you say that every major medical advance first began with a search for the literature?

MD: Yes, I would say almost every one of them. Indeed, it's difficult for me to visualize anyone doing an investigation or research who hasn't first done a bibliographic search. One of the things that a scientist is trained to do is to learn as much as possible about whatever subject he is interested in. The library's role is vital in every major scientific development. It provides the researcher with crucial information before he begins his research. Then it organizes what the scientist discovers or proves, to pass on that information to the next generation of researchers. So it has a very important active role, which is not fully appreciated. With modern technologies, libraries now provide far more rapid communication of that knowledge than was possible in the past. In other words, technology has accelerated the communication and the expansion of that knowledge a great deal.

SS: Do medical practitioners as well as biomedical researchers take advantage of this system?

MD: Very definitely. I don't think there's any question about that. Now, practitioners often do it a little differently from researchers. Sometimes the researcher is more likely to do it in a more direct way. Practitioners often get that information in an indirect way, because someone compiles that information from the Library, puts it in a readily available form for practitioners to read, and sends it out to them. On the other hand, the practitioner has the opportunity to validate the information first-hand. Let's say he has a patient with some rare condition, and he doesn't know much about it, and he wants to find out. He consults his colleagues, and they don't know much about it either. He can then go to the regional library, and if the information is not available there, it can usually be obtained from the National Library of Medicine.

SS: I take it that the Regional Libraries these days play an especially important role?

MD: I think that their establishment was a very significant development. As you know, we made a strong recommendation about that in the report of the President's Commission on Heart Disease, Cancer and Stroke, which I chaired. That was in December, 1964.

SS: I remember you were in the vanguard of those calling for regional medical programs of various kinds. But how did those libraries fit in?

MD: We were asked to make recommendations to the President and Congress to accelerate the attack upon heart disease, cancer, and stroke. Because we recognized the critical role of the library in research and in the transmission of health information, we made specific recommendations in regard to the National Library of Medicine and the establishment of Regional Medical Libraries as extensions or arms of the National Library of Medicine in Bethesda.

SS: Obviously, every medical institution has its own library, but I assume that because for the last twenty years there have been Regional Medical Libraries, as associate institutions of the National Library of Medicine, this has, in a way, reduced the need for separatism.

MD: That's right. In fact, it has enhanced the meshing and the whole fabric of this organization. Very definitely.

SS: Can we talk a little bit about medical advances generally? The National Library of Medicine, of course, is the sister organization of the National Institutes of Health.

MD: Yes. That's an interesting matter because there was considerable controversy originally about the Library's relationship with the National Institutes of Health, about whether it should be located there. Indeed, there was definite opposition to it by Jim Shannon when he was head of the NIH. He really didn't want it at the NIH.

SS: Why, I wonder?

MD: Well, he took the attitude, like so many, that the Library's role had no research function. He wanted only research at the NIH. He took (at least in my view) a very limited and narrow point of view about research and, to a great extent, basic research. He really wasn't very interested in clinical research either. I took a very strong position that the Library belonged at the NIH, so we came to a point where we were at loggerheads on it, and he was using whatever influence he had from the administration to keep it out of the NIH. At that time the decision hadn't been made where it belonged.

SS: This was at the point in the 1950s that it was still the Armed Forces Medical Library?

MD: That's right. The legislation was still evolving, and there was a certain amount of conflict developing because the AMA officials decided they wanted the Library in Chicago. They used their political clout to try to get it there. And Senator Dirksen tried to influence the legislation to that effect. I became aware

of this, along with other people who were interested, and we mounted a campaign against such a move. It wasn't that we objected to the AMA. It's just that we felt that the Library should be a kind of independent agency, not under the control of organized medicine, that it needed to be established as an institution of the government, and that the NIH was the best place for it. There was discussion for some time as to whether it ought to be part of the Library of Congress. Fortunately, the head of the Library of Congress at the time was not very interested in it. And that was fortunate because we didn't have to fight him. I took the position that it should definitely be related to a medical activity.

Even in a university that has a medical school, the library should not be a part of the general library of the university; it flourishes only when it is a part of the medical activity. In other words, it has to be stimulated. It has to respond to the medical activities. It has to be a participant in medical activities; otherwise it won't flourish.

SS: I do see, and I take it that's why historically the old Army Medical Library was a part of the Surgeon General's office.

MD: Well, of course it was started by Surgeon General Joseph Lovell. He originated it, although John Shaw Billings was the great expander. He gave it the greatest impetus because he loved books. And it was fortunate at that time. There was a curious lack of understanding and some people said "Why? Why does it have to be under or associated with medicine?" and I kept saying "Because it won't flourish otherwise." If you have an activity and that activity is not stimulated by need, it tends not to flourish. It has to be nurtured; it has to be stimulated; it has to consider itself an integral component.

SS: It's got to be related to the real world.

MD: Exactly. There's an interesting story in relation to the final decision that was made and the legislation that was passed (and it's in some of the material you will see recorded). We reached a stage where the legislation that Senators Lister Hill and Jack Kennedy coordinated -- Hill particularly, because although Kennedy was interested, he did not take as active a role as Hill. Hill really maneuvered the whole legislative process. He finally said to me, "We've got to do something about Jim Shannon. Why don't you and he come here, to my office, and let's sit down and talk about it?" So I called Jim and said, "Senator Hill wants us to go to his office, and he wants to resolve this. He knows you're opposed to it, and he knows I support it, and he wants to discuss it with us." Despite our opposing positions, we were good friends, we respected each other, and we remained good friends afterwards.

Senator Hill listened to us both give our reasons, and finally Senator Hill turned to Jim Shannon and said, "I think Mike's reasons are very compelling. I just can't buy your reasons. They don't move me at all." Hill was very perceptive. I got to know him very well. His father was a doctor, and he was very proud of that. So he related to medicine emotionally.

Then we come back to this situation with Chicago. The AMA headquarters were there, and they started putting pressure on various Democratic leaders, because the National Democratic Convention was coming up. The Speaker of the House, Congressman Rayburn of Texas, was a pretty influential Democrat, and he was aware of the pressures that were building up from Chicago and Washington. He didn't know much about the Library, and didn't care much about it, and he decided that this trivial thing was not going to create a problem. Hostilities developed for the National Democratic Convention, you see, so he tabled it, just held it up. He

wasn't going to let the bill go through. The Speaker can do that. Senator Hill called me and said, "Look, you know, we have the votes. We could pass this bill to get this Library established, but the Speaker won't let it come up because of this political situation. Do you know anybody in Texas who has any influence with him?" I had only come here recently, and I didn't know very many people, but I inquired of a few friends who I thought were responsible citizens, but they didn't know anybody who had very great influence with him. Rayburn was from a little town, Bonham, and a pretty independent fellow. It suddenly dawned on me that I had operated on the husband of the Secretary of the National Democratic Committee, and I had gotten to know them well. The Secretary's name was Dorothy Vredenburgh, and she has since remarried, but she is still Secretary. I called her up, and I said "Dorothy, I think you could do a great service if you have the influence to do it, and I think you have." And I explained the situation to her, saying, "You know Rayburn very well, and maybe you could persuade him." I said, "We have the votes, and we need to get this Library established. I don't want to see the bill passed up this year. We might have difficulty getting it in next year. Everything's all set now; all we have to do is get it out of committee." And she said, "Mike, I'll see what I can do." So she called me a day or two later, and said "I've got it done. He's going to release it."

SS: That's amazing.

MD: I called Senator Hill and I told him about it, and he was just as delighted. I said, "Shall I call John Kennedy or will you do it?" And he said "No, I'll do it". So he did. And that's how it got through. And I think at some point during the Sesquicentennial celebration we really ought to invite her up. Her role in this is not fully known except by those who were involved. She never made a

great point of it afterwards, although she did invite me to come and have lunch with Rayburn afterwards, because I wanted to thank him personally, and she said, "All right, we'll have lunch with him together." We did. And I did thank him. They also invited Senators Hill and Kennedy, and it was a very nice thing to do. Dorothy is still living, I believe in Florida. She's a lovely person.

SS: I have known her a long time.

MD: I am very, very fond of her. I keep in touch with her. We correspond from time to time, and every Christmas I get a note from her, and I send her a note.

SS: In all my reviews of written history or in conversations, I've never heard that story. That's a wonderful story to get on record.

MD: We never made a great point of this, and she is a very lovely person who never wanted any public credit. Afterwards I said: "Dorothy, you don't know what a great thing you've done." And every time I write to her or drop her a little note, I always thank her again. She doesn't expect anything; she's not that kind of person.

SS: The upshot of it was that in 1956 the bill was passed and the National Library of Medicine was created as a national, "civilian" institution.

MD: After the legislation was passed, they established a Board of Regents -- I was appointed to that -- and then we had the problem of finding the right site. These things sometimes get a little political. I stuck to my guns. I said,

"You know, this really belongs at NIH," and one of the sites that I suggested was an old home that was used as a conference hall on the NIH campus. I thought it was a lovely spot. Fortunately, we were able to get that land, just adjacent to NIH. But there were all kinds of pressures to put it in a number of other places. I just kept insisting on a site near NIH. And, fortunately, I had a few friends on the Board at that time, like the Professor of Surgery at the University of Pennsylvania, Dr. Ravdin, who took the same position. Ravdin was a strong supporter of my point of view.

SS: Is that Isador?

MD: Isador Ravdin, yes. Chauncey Leake was also a strong supporter. So we had pretty good strength. Even after we had the legislation passed, the administrator of the NIH exerted some resistance to putting it on the campus.

SS: But your principal point was that it needed to be related to a substantive activity . . .

MD: Yes, that was my principal point.

SS: I think of you as an "activist physician" and researcher. Your attitude about improvements in health has been that you can't just do the research and wait to let people gradually find out about what has been learned.

MD: You're quite right about it. I'm a very strong advocate of getting that information out. In fact, that is an issue about which Jim Shannon and I fought

all the time. You'll see my views on this in the report of the President's Commission on Heart Disease, Cancer and Stroke. I wrote most of it myself because I wanted those views expressed. Fortunately, the rest of the commissioners held the same views. You'll see in that report an emphasis on a need for the NIH to get information out, not only to the profession, but to the public. We even made recommendations for a regular, budgeted program of not only public relations but public information. And we suggested using all the media, including television. Dr. Shannon used all kinds of arguments like "The medical profession, organized medicine, is not going to like this; we're competing with them." I said "Nonsense! You're not making any money. You're helping them. You're going to help them make money, but you're not making any money out of it. Nobody else is doing this. And you've <u>got</u> to get the information out. This is the only way. You've got to educate the public. How are you going to get the public to engage in preventive activities if they don't know what to do?" The American Heart Association can do only a limited amount, because they don't have the funds to do it all; the same is true of the American Cancer Society. And I said, "You bring them in." And in the report I recommended bringing them in. You have a coalition of these people, and you join with the private organizations. I recommended budgeting monies for these purposes. The NIH was the one to do it.

<u>SS</u>: They're the institution most actively engaged in biomedical research, they are non-partisan, they're objective . . .

<u>MD</u>: As an example of what they can do, Mary Lasker and I went to see the then-Secretary of HEW, Elliot Richardson, about hypertension. We couldn't move the NIH to do what we thought was necessary to educate the public about hypertension.

We explained this to Secretary Richardson, and he approved it. He said, "This is an excellent idea." So he called the Director of the National Heart Institute, Ted Cooper. He virtually ordered him to do something about this, to get the word out. They appointed a special division on hypertension for that purpose, and it's still there. And then we created what was called the Citizen's Committee, and I'm still the Chairman of it. We created a coalition. We got the American Heart Association, the American College of Cardiology, the American Medical Association, and the National Heart Institute (now the National Heart, Lung, and Blood Institute), and they appointed a specific person of the NHLBI division on it, and we now have a very active program. And what's happened? The consequence is that certainly 30 to 40%, possibly 50%, of the hypertensives in this country are now treated. And at that time it was less than 5%.

SS: Over what period of time has this occurred?

MD: Oh, about fifteen years.

SS: So, fifteen years ago, when you found ways medically to control hypertension, the question was how to get the word out to doctors and the public . . .

MD: You must get it out to the public. People have to be aware that hypertension is a "silent killer," usually not associated with any symptoms for a long time. How does a fellow know he's got hypertension? You've got to tell him to go see his doctor. And we even set up hypertension tests at the same sites where you can get your blood pressure measured -- in the supermarkets and a number of other places, where people could drop in and somebody would take their blood

pressure. Somebody trained to do this but not necessarily a physician. If they found out you had hypertension, they would refer you to a doctor. A pretty good sample of studies has been done every year, and each year we have increased the number examined.

Here in our institution we have a hypertension program. Hypertension is particularly prominent among blacks, and to some extent among Hispanics, and there are things we ought to know -- maybe it's related to their diet. In any case, we see a lot of them in our county hospitals and clinics. We set up a program for them, advertise it, we educate the public about it, and in this general community, we have now increased the number of persons with the problem who are being treated to about 50%.

SS: Would you talk about this advance a little more generally? A generation ago, cardiovascular diseases were the biggest killer, and that assumes hypertension as a specific component of that.

MD: Yes, of course. Cigarette smoking, hypoglycemia, all of these factors, so called primary and secondary risk factors, have become increasingly understood by the public. In 1939, Dr. Alton Ochsner and I, having operated on many patients with cancer of the lung, called attention to the relation of smoking and cancer in an article published in Surgery, Gynecology and Obstetrics (February 15, 1939, Vol. 68, pp. 435-451). We subsequently published several additional articles, with further data supporting this relationship. When I began specializing in cardiovascular disease, I saw overwhelming evidence of smoking as a serious risk factor in cardiac and vascular disease. As the evidence mounted, the Surgeon

General's Office became convinced of the need to warn the public of the danger of smoking, and the subsequent educational campaign has resulted in a decline in the number of cases and deaths attributable to smoking. There is no substitute for education, and, in matters of health, it is paramount.

SS: But first, increasingly understood by the medical science professionals.

MD: The medical profession, that's first, always. But once it's generally accepted by the medical profession, you have to move into the public and get the public to respond, to be educated about it. I think we have to be activists, using every means at our disposal. We have to use the news media, particularly. And they respond. My experience with the news media is, that they will respond to this largely because they know that people are interested in health. The major problem really lies in educating them. There is a certain amount of confusion on their part because they hear this, or read that, and so on. And so they're sometimes confused.

But today there is a tendency on the part of people to take greater responsibility for their health. They're exercising; they're eating better, they're cutting down on fat content; they're reducing their weight; more and more are quitting smoking. And more and more of them are coming in to find out about their cholesterol levels. A new technique, a machine that can measure lipid levels from just a little prick of the skin, is going to revolutionize control of high cholesterol. In fact, the Citizens for the Treatment of High Blood Pressure is now starting a program on cholesterol in the same way as it did on hypertension.

SS: So fundamentally, it's a very new and simple way to test for cholesterol levels? And inexpensive?

MD: Very inexpensive. In fact, we hope to be able to put these machines in different places just as we did the blood pressure machines. The person tested will get a report immediately, and if his cholesterol level is rising, he will be advised to see a doctor. We are working on ways of getting these machines bought and placed in various places, and we are approaching the private sector to find the funds. Pamphlets will also be distributed. We're trying to organize with the same kinds of groups; the American Medical Association, the American College of Cardiology, and the American Heart Association -- the same kind of coalition. They're very enthusiastic about it.

SS: But with the active cooperation of the National Heart, Lung and Blood Institute?

MD: Oh yes. Claude Lenfant, the Director of the NHLBI, is strongly behind this, and we have several people there, Rivkind and several others in the NHLBI, who are working with us.

SS: Do heart disease and cardiovascular diseases together still represent the major threat to the healthy life in our country?

MD: Oh, no question about it. You see, it causes more deaths than all other diseases combined.

SS: Is that true up to a certain age? In other words, is it the leading killer for all groups?

MD: For most groups. But if you take a specific group, let's say children, then it is not the leading killer. As a matter of fact, accidents are. But if you take the totality of the population, rather than any specific groups, it is highest among the groups beyond the age of forty.

SS: But if you look at the advances, whether in understanding and control of cholesterol, in control of hypertension, surgery, which you know more about than I suppose anybody -- there really have been quite some significant advances.

MD: I don't think there is any question about it. If you look at the advances that have taken place over the past thirty years, they have been remarkable. In almost any cardiovascular field, hypertension for example, we have moved from hardly any kind of good control, from an Indian root drug, to a whole series of very specific types of drugs, including calcium blockers and beta blockers.

SS: How did you see the role of the National Institutes of Health in all of this?

MD: I think it played a major role. If you had to give a percentage of the credit for these developments in all these spheres of medicine, I would say 75% of the credit belongs to the NIH.

SS: That's remarkable.

MD: I can't think of a major development that has not been supported by the NIH.

SS: The cardiovascular field is your field of course. But would you be willing to talk about your perspective of advances in other fields? How are we doing in cancer research?

MD: I think we're doing reasonably well. Cancer is, you see, many distinct diseases. We don't know the cause of most cancers. We have made tremendous strides, however, in dealing with arteriosclerosis. We have a much better understanding of the nature of arteriosclerosis, the patterns of the disease, and what we can do about it. And we have done a lot about it.

I am in the process now of writing a paper on the history of surgery in arteriosclerosis, which I am to give in Paris at an international symposium. And when you go back, say 30 to 40 years ago, when I was a medical student in residence . . .

(break in tape)

SS: The proposal to establish regional medical centers drew strong opposition. Some leaders in organized medicine thought this was the first step for the federal government to get too heavily involved in the practice of medicine.

MD: Quite correct, and they had this same attitude about Medicare. As a matter of fact, when Medicare was proposed, and President Kennedy was trying to push it, he was vigorously opposed by the AMA and organized medicine. I strongly supported it. I didn't consider it as a step towards nationalized medical service, which I am opposed to. President Kennedy asked me if I would come up and bring some prominent physicians to join him in a television program to show that all the doctors were not opposed to Medicare, that some were for it. I called around to a number of my friends across the country, professors of medicine and surgery, and do you know, I couldn't get a single one to come -- even though they would tell me they supported the proposal. They were afraid to speak up. So I was the only one there.

SS: Has that fear now been eliminated?

MD: Oh, I think so, yes. Of course, it wasn't long after that that doctors recognized that this was a kind of a bonus. They'd been taking care of these patients for nothing, or not taking care of them at all; now they could take care of them and be paid for it. Of course, there is a problem now because the cost has mounted, but it's perfectly natural. We have a much higher percentage of the population in the old-age category. And Medicare is the only way they can get help. I think that we, as a nation of compassionate people, must take care of them. We can't just set them aside. We can't blind ourselves to their health-care needs. We've got to take care of them no matter what it costs. A country as well off as ours shouldn't have any difficulty in doing that. Again, it comes back to priorities -- how much money you assign to health. They keep making a great point about 10% of the GNP now for health. Well suppose it is 10%, 12%, 15%, what difference does that make? I don't care what percentage of the GNP is for health. As long as we recognize that health is the most important thing.

People don't appreciate this, but as a practitioner of medicine, I see it every day. I see people who have everything but their health. They've lost that, and now they have nothing. They're millionaires, but they have nothing. When you've lost your health, you have nothing. Nothing. If you're near death, what good is your money? If you're disabled, or have had a stroke, and you've got millions, you might be able to hire somebody to push you around in a wheelchair, but your millions cannot restore you to an active, productive life. If you don't have your health, you have very little. Really. Disraeli said, years ago, that the health of the people is the foundation on which all their happiness and their power as a state depend. That's true. So it's a matter of priorities.

As far as the regional medical program is concerned, that came out of the President's Commission on Heart Disease, Cancer and Stroke. Our concept was that centers of excellence should be established in a given region, and these centers of excellence, in heart disease, cancer and stroke, would be supported to a certain extent by grants from the government. That doesn't mean -- we made it clear that we never intended -- that the practice and the care of the patient would be supported by the government. But we would see to it, through government grant money, that there were experts in the field in these regional institutions. The centers of excellence would attract the patients to that region, because here was a place where they could take care of a complicated cardiovascular problem... or a complicated case of cancer and so on. I went all over the country explaining that, and the doctors who were opposed to the idea had not even read the legislation. I would meet with organized medicine, county medical scientists, state medical society people. I spent a great deal of time going around the country to meet them, to try to explain the legislation to them, and I would often have to say: "Where did you get that erroneous impression from? You're making a criticism that doesn't relate to the legislation. Read the legislation. Show me where it says that." Well the truth was that it didn't say it. But they jumped from what was proposed to what they believed would happen. That was a real problem.

SS: What they feared hasn't happened and my sense is that we've come a long way in attitudes toward medicine, toward research, toward who is responsible for our own health. No question about it. We've come a long way.

One of the new elements -- and you've been in the forefront of this too -- is simply reminding individuals and people generally that we are all responsible for our own health. We can't just wait for doctors to take care of us.

MD: Exactly. That's why education is so important.

SS: How do you think differently about your own health, the health of your family, than you did 30, 40 years ago when you were starting out in medicine?

MD: Well, I don't take it for granted any more. That's the problem with most of us. That's where the mistake is made. Most of us take for granted the fact that we are healthy, and we think we are going to stay healthy. We are "asymptomatic," and therefore we go about our business without concern for our health. And so we pick up smoking, we pick up other kinds of bad habits, and as long as we are not immediately threatened with any symptoms, we pay no attention to our health. One of the important attitudes we need to adopt is that health is our most precious treasure. We must try to nurture it and make sure it is sustained.

At some point the parents turn over to their children responsibility for the children's well-being, but in the meantime they must teach the children something about health. For example, I have an eight-year-old daughter, and one of the things that I did for her very early on was to buy a book called "The Body." This book is written for children, but it's correct; the drawings and illustrations in it are appropriate to a child's book, but they are accurate. They show where the heart, lungs, kidneys, and other organs are. She reads this book now, and she understands it. She knows what the kidneys do, what the lungs do, what the heart does, and so on. She asks questions, which I try to answer. And her mother, who is interested in nutrition and diet, tries to teach her about these matters -- what's good for her health and what's not. So she's going to learn a great deal about her health. And when she gets to be an adult, she will be very health-conscious. Not a health fanatic, but health-conscious. That's the important thing. She won't smoke because she knows why she shouldn't. She won't get into drugs because she'll know

why. And she will have good nutrition. As she grows older, she's going to be reading and learning more. And I think that's what is important.

We have an outreach program here in the DeBakey Heart Center, through which we are trying to teach families how to educate their children in relation to health. At the same time we are also teaching the parents.

SS: Is this an understanding that is catching on?

MD: I don't think there's any question about it. In the Houston Independent School District here, I started what is called "The High School for the Health Professions." It offers all the educational requirements for completing high school but, in addition to that, it places great emphasis on certain medical aspects of education, so that the students become aware of these problems as well as what careers are available in these fields. They apply for admission to this high school. It's like a magnet school. And applicants have to be very good to get in because the competition is great. The school has the best scholastic record of any school in the Houston Independent School District, with something like 90% of the students going on to health-related careers. There are virtually no discipline problems and no drug problems.

SS: We are on a very good plateau right now, aren't we? That is, through research, largely supported by NIH, we have made major advances; our clinicians across the country through communications systems, including that of the National Library of Medicine, have an easier time of keeping up to date on all these advances. Organized medicine is not so afraid of government; researchers aren't so afraid to communicate findings; the people seem to be becoming more aware of their own responsibilities with respect to health.

MD: That's right. In knowledge and health-care delivery, we're in better shape now than we've ever been. And the American people are really in better health than they've ever been. You see more and more evidence of this everywhere you turn. I speak from time to time to some of the employees of industrial organizations, like Exxon and others, after which I usually have a question-and-answer period. They express great interest in their health. They want to know what's the best kind of diet and what's the best kind of exercise. They ask all kinds of questions about their health. Many of these industrial concerns are now encouraging discussions and activities related to health. They believe in it, and they believe that their workers will perform better if they are healthy. They will need less time off for illness and health problems. So it has become very important.

SS: The dark cloud on the horizon, as I see it, is the cost of health care.

MD: That's true. That's the big bugaboo, and what is even worse is, it's being exaggerated. There's no question that health-care costs are rising. This is true in every country in the world that is making an effort to improve the health of the people. Whether it is a national socialized program of health and wherever it is, the proportional increase in costs is about the same. This is as true in England as it is in the United States or in Canada. I just returned from Australia, and they have the same problem there. Two factors are responsible. One is that we have an increasing aging population, which generates a large part of the cost. And the second factor is that more people have access to good medical care than ever before. People want it; even if they can't afford to pay for it, they still want it. They're going to come to the hospitals. You can't just drive them away. So there's no question that the cost is going to increase.

But I don't think we ought to belabor the matter. We ought to find ways to provide the care, take care of the costs, and not allow the costs to be excessive to the point of waste. I certainly would like to see ways of making health care more efficient, but not by sacrificing quality or accessibility. That's the important thing, and to some extent some present measures are doing just that. You take the DRGs, for example. The average profit from DRGs among the hospitals in this country was around 10 to 15%. It hasn't changed very much. But the accessibility has; it has declined. This mechanism has also increased the limitation of quality care. People who need a valve replacement may have to wait. And that's exactly what's happened in Europe. They've put patients on waiting lists. I was in Ireland last year, and one of the top Irish surgeons told me that his waiting list for hip replacements was five years.

<u>SS</u>: Gracious.

<u>MD</u>: For cardiac bypass, it is three years; 15% won't make it. That's rationing medical care <u>de facto</u>. And I strongly oppose that.

<u>SS</u>: Well, let me end now just on a personal note again. Were your parents healthy in their later years?

<u>MD</u>: Well, yes, right up until they died. My father was in his late eighties when he died, and he died, I think, of an arrythmia, because he died suddenly in his garden, which he loved. He was very active right up to the point of his death. My mother, too, was very active until she died. She was in her late seventies. They were both very health-conscious. They had always been very healthy and very active and were highly disciplined. Both were strong advocates of a diet rich in

fresh fruits and vegetables, fish and fowl -- long before these became fashionable foods, and they saw that their children ate nutritious, well-balanced meals. I never saw any junk food in our home. They also considered smoking and tobacco and alcohol to be harmful, and, as a consequence, none of us ever smoked or imbibed because we were impressed with their attitude. They were highly self-disciplined, and they impressed that discipline on us, and encouraged us to learn everything we could about everything, including health.

They believed strongly in the value of education. We were all taken every day to the library to choose a book to read. They let us read anything we wanted, but, in addition to our school work, we were expected to go to the library to get a book. I guess that's one of the reasons I became interested in libraries, including the Library of Medicine.

SS: How do you see your own future? Will you and I live to 100 and be healthy?

MD: That's a very important point you raise. I think it's important that we be healthy as long as we live. One of the unfortunate things that's happening is that we're making a strenuous effort to keep some people alive who aren't really living. You take a patient with Alzheimer's. He doesn't know what's going on. I don't think we ought to engage in any life-threatening activities, mind you, but I do think that if you have a patient in the hospital in a coma that we know is irreversible, it is cruel to keep him alive by artificial means for days, weeks, and months. It's cruel to the family and to the patient. He's dead. There's no sense in it. The body is there, but if it weren't for the machines connected to him, the body would deteriorate very rapidly. We have moralists and ethicists getting involved in these philosophical discussions, some of which remind me of

the old discussions about how many angels can dance on the head of a pin. They're unrealistic. You have to be realistic about some of these things, and, for me, ethics is very simple. I don't know why it has to be complicated. It boils down to the very simple Golden Rule. In fact, I published an article with that thesis. When you come right down to it, medical ethics is no more than the Golden Rule of the Bible: Do unto others as you would have them do unto you. In the final analysis, that's the basic principle of ethics. So why make it complicated?

Don't misunderstand me; there are some complicated ethical problems. But ethics itself should not be complicated. There are some thorny problems of judgment, clinical judgment, what to do about certain puzzling cases. But we tend to overdo some of these things, and then we carry them into court and make it even worse.

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