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Session 1GS
The State of Medicine in 1998 and the Next 50 Years

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Summary: Dr. Lundberg is with the American Medical Association, where he is the editor-in-chief of Scientific Information and Multimedia, with editorial responsibility for its 39 medical journals, American Medical News, and various Internet products, the editor of the Journal of the American Medical Association*, and a member of the Institute of Medicine, of the National Academy of Science, and holds academic appointments as a professor at Northwestern and Harvard Universities.*

Ms. Anna M. Rappaport: Dr. George Lundberg will speak to us about the state of medicine in 1998 and offer a glimpse of where it may be going in the next 50 years, with an emphasis on what will change and what won't change.

Since 1982 Dr. Lundberg has been at the American Medical Association where he is editor-in-chief of *Scientific Information and Multimedia*. He has editorial responsibility for 39 medical journals, *American Medical News*, and various Internet products. He also serves as the Editor of *Journal of the American Medical Association (JAMA)*. He is a frequent lecturer and radio and television host and guest. Dr. Lundberg also holds academic appointments as a professor at Northwestern and Harvard.

Dr. George D. Lundberg: I consider it an honor and a privilege to be the keynote speaker at this important meeting. All of us in modern America have our lives affected every day by recommendations from and decisions made by actuaries, even though many of us labor with the misunderstanding or the lack of information or knowledge about what you basically do. My guess is the general public, if given a quiz as to what you do, would flunk. I would see that as a great opportunity for

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public education on the part of you and your particular organizations. Actually, the essence of professionalism is self-governance. What I've been seeing at this meeting speaks very highly of you as a profession because you are, in fact, self-governing through the processes I've heard described.

One disclosure before I go further. I am an employee and a member of the American Medical Association. I do not speak for the American Medical Association. It speaks for itself. I'm the editor of its journals, and the journals all have editorial freedom. We exercise that freedom in speeches such as this, in addition to what we put in publications. So, don't leave here saying, "AMA said this, and AMA said that." There might be some information in my talk that is the position of the AMA, and if that's true, I will say that quite specifically so there won't be anything subliminal about it.

I would like to know how many of you mainly work in the health area. It looks like 67%. Good. I'm very pleased to see that. How many of you are physicians, nurses, or other caregivers? I see one. How many of you are patients? If you didn't raise your hand, you must be an adolescent who figures you're going to live forever. How many of you personally have health insurance for yourselves or your families? Almost everybody. Some 15% of our fellow Americans don't, on any one day, have health insurance for themselves.

I gather from your answers that you might have some interest in the kinds of things I'll have to say. Much of what I say will be controversial. Sometimes I'll take a position. Sometimes I'm just framing an issue. Sometimes I'm deliberately trying to stimulate you or somebody else to think about a particular topic. As I go through my talk, I want you to think about how it will affect your work, your families, your children, and your grandchildren. I want you to think about how it affects our country and all of our people.

First, I will discuss context. Where are we now? What is the big picture? We'll discuss cost, access, and quality. Second is ethics and the underpinning of the practice of medicine. Third, the other underpinning of the practice of medicine is science. What is it? How does it develop? How is it applied to things that will affect what you do, in addition to being a patient, particularly in the areas of guideline development, application, and tangentially, payment decisions? Fourth is management of managed care. There is not a lot about this. I know a lot of you know a great deal about managed care, but I'll touch on it. Then we'll look to the future. The future, of course, is largely genetics and molecular medicine, science, and ethics, especially ethics. We'll look at life span potentials as envisioned by people who are not actuaries but who are looking into the future in their own ways.

Then we'll close with some things I consider immutable elements of medicine and professionalism.

Bob Dylan said, "The times they are a'changin'." Indeed, they are. We are still living in what I consider a golden age of medicine, although some of my fellow physicians think it's turned to copper because they no longer call all the shots, but it is a golden age in very many ways. There have been huge advances in science. There's abundant technology (some say too much). Everywhere I go in our country there are excellent inpatient and outpatient facilities. We have enough physicians to take care of all of our people well (and we might even have too many in some areas). We have plenty of money to take care of all of our people well if we use it correctly in appropriate ways. We still have it. We'll keep it the rest of this decade. There are only a couple more years. How much will we keep pluralism? I would gather that a fair amount of your employability depends upon keeping pluralism so you can balance one thing against another.

We're living in an era of rapid communications. We're emphasizing constructive entrepreneurialism, which can be quite good. We're preaching and teaching prevention, even to medical students, and we're utilizing scientific management principles as we run our health care delivery systems. That's very good. We have a great deal to be proud of in our area of medicine, but also we have a lot of problems.

Medical health care constitutes an increasing percentage of the gross national product, a tremendous strength. Where better to spend our money than on health care? However, it can be tremendous weakness when the slope is high, although the slope is now flat.

Entrepreneurialism versus professionalism. They can be very different. There is greed and conflicts of interest. Incentives to give too much care, which I grew up with in my generation, are being replaced by incentives to give too little care. The answer, of course, is why not give the right amount of care? That's where you could come in, at least in some way. There's hucksterism and not caring for the poor. There is rationing of medical services (more about that later). We are prolonging dying, not just prolonging living. It's not the years in your life. It's the life in your years that matter in many instances. There are also insufficient preventive medicine efforts, although we're doing a lot better.

Biased expert testimony is not a big deal except if you're in my field of pathology and have done a lot of expert testimony. It galls us to have some friends go into court biased because a court should be unbiased, at least in the area of expert

information. Professional liability is still considered a big deal by practicing physicians.

Out of this list, three biggies always come back: cost, access, and quality. Let's start with cost. When I was a child in the 1930s and early 1940s, we had a slope that was running from about 3.5–4.5%. There was a commission on the cost of health care in 1937 to examine what was going on with this wild increase in cost of medical care in our country. Medicare came in 1965, a lot of people blamed that for the increased cost. It did have a lot to do with it, but the real increase in the slope started ten years before Medicare, in 1955. It went up very rapidly. Until the middle of this decade, it's been flat. Not even the best Blue Angels fighter can go straight up forever. It has to level off, and it did, for several reasons.

Some people say it's going to start going up again. Others say it isn't. Economist Uwe Reinhardt said if the payers had any courage and intelligence to work this thing out, this would go down, and you'd still get the same value for much less money because the rest of the world does that. Here are some reasons for increased cost: Medical practice inflation in excess of general inflation is 16%. That's the cost added just because you happen to be in the medical business. This is playing out in the pharmaceutical industry big time. What do you suppose the cost is to Pfizer of one 50 mg tablet of Viagra? It's not $10. They say, "We have to realize our research costs." Viagra was discovered purely by accident.

Intensity of services is about one-third of the increased-cost reasons. New technology. Defensive medicine. Inappropriate uses in a supply-induced demand. Marketing. Increased number of specialists. Drugs such as alcohol and tobacco. Violence. AIDS. In one-third of those items people can make a difference. It's harder in those other areas. The increase in the number of elderly is only 10% of the reason for higher costs. Many people say, "The reason it costs so much is because the elderly cost a lot of money." They do, but these costs make up only 10% of the cost. The public doesn't believe any of that. They think it's fraud and greed. There is plenty of fraud and greed, and it's not only among physicians. They're small potatoes compared to the other numbers.

The 1990–95 numbers haven't changed that much. The population is roughly 260 million. Medicare has about 37 million. Medicaid has about 34 million, which is up a bit now. The uninsured make up 42–43 million on any one day. Our nation is seriously underinsured. The best data are from the *Harvard School of Public Health*, but they're ten years old. The number published in my journal about three years ago was 29 million. We think it's more than that now. That totals up at 143 million, which is 55% of the population. When the esteemed *The Wall Street Journal* comes out and says we're looking at what's going on with all those people

who have private insurance through their employment, they are referring to the minority of the population. The majority of the population are government subsidized, the uninsured, or the seriously underinsured. Some doctors from Texas said to the AMA that they want the government out of medicine. They said that the government can take their money and leave. Do you really want them to take all that money and leave? Of course not. That's absurd.

There are questions about quality of care. Robert Pirsis defined quality many years ago in a book called *Zen and the Art of Motorcycle Maintenance*. That whole book is about quality. As an editor, I'd like a shorter definition, so, I use the definition of the American Society for Quality Control, which is, "The totality of features and characteristics of a product or service that bears on its ability to satisfy given needs." Quality is needs satisfaction. Whose needs are we trying to satisfy? I guess we might be trying to satisfy the needs of the employer, the patient, the family, the physician, the nurse, the insurance company, the government, and so on. You mean quality might have a different definition for different people? Yes. How do you measure that? With great difficulty.

President Rappaport was kind enough to have a small group of us in her suite, and we mostly sat around and chatted. Howard Bolnick ran the thing, and we talked about things including quality, and I was pleased to hear several people say, "We're not quite sure what that is or quite how to measure that." It is difficult. It is needs satisfaction. Quality measurement systems have evolved and are evolving currently. Among the methods that one can use is clinical performance of a physician, a practice, a group, a group practice, or a health care plan. How do they perform? How well do they do on the amount of time spent in a waiting room? How well do they do on a Cage questionnaire in addition to taking your temperature as part of your vital signs? How frequently do they do a mammogram? These are things that you can measure. It is not that hard to do. It's very hard when you get very sick like in the intensive care unit or the coronary care unit because then you have to risk adjust all over the place in terms of severity of illness and so on. You can do that, but it's complicated, and it's very expensive.

As I indicated, there is satisfaction, but you better ask the patient, the provider, the purchaser and the payer (the four p's), because each of these people will have different needs that must be satisfied.

Health status is another measure of quality. Are they healthy? If, however, nothing bad happened to them, and their genes were such that they would never have anything bad happen to them, then that has nothing to do with the quality of the health care system. Maybe it has to do with their genes.

Then you have administrative and financial elements, which are most often used because the data are there. The Health Care Financing Administration (HCFA) has a great deal of data.

I asked the president of the National Committee for Quality Assurance, "How do Health Employer (Effectiveness) Data Information Set (HEDIS) rules require that people evaluate the quality of care given to the sickest patients, the ones who die?" She didn't have an answer. Her jaw dropped, and she called in somebody else to answer, and he thought he knew what I was getting at. If you don't autopsy a significant number of people who die, you don't know why they died. You certainly can't know what they had or what went wrong or what the quality of care was. The number of autopsies done in nonteaching hospitals in urban America these days has plummeted. Autopsies topped out in the 55% range around 1964, just before Medicare came in. These are Chicago-area hospital rates which are about the same as national ones. If you take out the teaching hospitals, that number is down around 3–4%, and the hospital in Chicago with the largest number of deaths in 1996 is not a teaching hospital and did not have one autopsy. The *Chicago Sun-Times* asked me about the quality of care that was given at that hospital, and I said, "I have no idea, and neither does anybody at that hospital." I care, and they don't. They don't like me much at that hospital. When you speak the truth, you live with the consequences, whatever they are.

Think about that from an actuarial aspect. I have a paper under consideration right now that's challenging the entire National Center for Health Statistics information about why people die in America, and it probably isn't going to make it because the numbers aren't that big, but they're big enough to be very impressive. The number of people coded out with heart disease is probably much higher than is really the truth if you were to resolve this issue of what was really found when you looked at them after they died. That's a quality measure.

With respect to ethics, there are three levels of controllers in human behavior. Psychologists will give you 50 more, but these are the three basics. In a hierarchy, they are personal morality, societal ethics, and public law. Morality is defined in a dictionary as "the quality or fact of conforming to or deriving from right ideas of human conduct; goodness, and uprightness of behavior." If personal morality were strong enough and ubiquitous enough, there would be no need for societal ethics or public law. Alas, such is not the case.

Descending the hierarchy of ethics are principles of conduct governing an individual or profession, the ideals of character manifested by a people. If personal morality and societal ethics were strong enough and widespread enough, there would be no need for public law. Alas, such is also not the case. We have many

laws. We have so many laws that we have to have experts in law—lawyers. Laws are a rule or a mode of conduct or action that is formally recognized as binding by a supreme controlling authority and is made obligatory by a sanction.

The AMA was founded in 1847 principally to create standards for medical education for medical practice, because there weren't any at that time. Ethics was one of the main reasons, and over the years, the AMA has continued to hold ethics dear. In 1980, the AMA created its basic code of medical ethics which continues to be applicable today, including last week's meeting when our incoming president, Nancy Dickey, the first woman president in the history of the AMA, used these seven principles as part of her inaugural address, which I will be publishing in an upcoming issue of *JAMA*. I thought I'd go over them because you might not have seen these. They are the controllers of how physicians behave, and they really do have a lot to do with where physicians are in terms of specific patients and in terms of positions they take in relation to a lot of the rest of the health care business. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity. A physician shall deal honestly with patients and colleagues and strive to expose those physicians deficient in character or competence or who engage in fraud or deception. Physicians shall respect the law and also recognize the responsibility to seek changes in those requirements which are contrary to the best interest of the patient, (respect the law, but break it, if needed, to get change for the patient). A physician shall respect the rights of patients, of colleagues, and other health professionals. Physicians shall continue to study, apply, and advance scientific knowledge. Physicians shall make relevant information available to patients (through patient education), colleagues, and the public. Physicians shall obtain consultation, and use the talent of other health professionals when indicated. Physicians shall, under provision of appropriate medical care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical services.

Those are principles of ethics that apply throughout medicine. They are very fundamental and very specific for the AMA. Of course, there are probably 200 or 300 pages of additional information that expand upon those eight principles, but they are fundamental, and they're very important.

Science is the second big underpinning after ethics. What is science? It is the possession of knowledge as distinguished from ignorance or misunderstanding. A scientific method involves using principles and procedures for the systematic pursuit of knowledge involving a recognition or formulation of a problem, a collection of data through observation and experiment, and the formulation and testing of a hypotheses. We, in our medical journals, try to publish the results of these tests every week or every month by utilizing a scientific method. If you're in the

guidelines business at all, and many of you likely are, I refer you to Bob Lawrence's work, now 11 years old, in a 1987 issue of *JAMA*, "Stratifying Methods of Assessing Effectiveness of Clinical Interventions from Top to Bottom." All of these have value, but the ones at the top have the most value, and let's start at the bottom with prospective, blinded, randomized, clinical trials with enough statistical power to prove a point within a certain statistical range stated up front in a study design. That's the gold standard. We all want controlled clinical trials. Anything less is a lesser quality of evidence for effectiveness of clinical intervention upon which guidelines for diagnosis and treatment are based. Second, there are control trials without randomization. It's better than nothing, but randomization matters greatly, and that includes, of course, proper control groups in every instance. Case control analytical studies are number three. Fourth, there are also multiple time series studies with or without intervention. Fifth, there are remarkable results in uncontrolled experiments. Penicillin was one. There wasn't a control group, but the stuff was growing, and it worked. Now and then uncontrolled experiments work, so now and then that works, but not very often. Descriptive studies, anecdotes, and clinical experiences are sixth. Delphi studies or single-pass surveys, and nominal group techniques could all be merged. Finally are reports of expert committees.

Where do most of those hundreds and hundreds of guidelines come from? They come from reports of expert committees. Quality of evidence that goes into this variable depends upon the guideline.

David Eddy's column on clinical decision making started in *JAMA* and had 37 chapters and is available in book form. He said, "In making health decisions, a physician might identify the options, identify possible outcomes of each option, evaluate evidence of all options, estimate the consequences of each option, weigh the benefits of the option versus hard consequences, and consider logistic, economic, legal, social, and personal factors, and choose the best option. When you see your doctor, determine whether the doctor goes through this when trying to figure out what to do for you. That's not what really happens. Instead, one tries to set standards or guidelines. A standard is something established by authority, custom, or general consent, etc. A guideline is an indication or outline of policy or conduct for a definite course or method of action selected from among alternatives. These are all synonyms. "Parameter" would be another one.

John Wennberg said that the appropriate use of guidelines requires that they be based on sound science and serve the ethical purpose of making the significant choice. Americans want choice. Americans hate monopolies. Americans don't mind stratification of people, which means some people get more than others. That's the American way, and it's not going to change in my lifetime. But the concept of choice is clear to physicians and patients. Most patients in America now

want to participate in choosing their doctor, although a significant minority still does not want to participate. In other countries, they don't want to participate at all. But the clear words here are choice, ethics, and sound science, if one is going to use guidelines.

Bob Brook said that there are all kinds of things you can do with guidelines if you have them. You can improve physician performance by pressure of the guidelines, if they're good. You can give consumers choices of physicians or institutions. Some people even sell them for large amounts of money. Memberships in professional societies and education programs could be based on whether guidelines are used. Relicense or recertification can be a guideline. There is patient/physician consultation to choose therapy. Court decisions and payment decisions could be based on whether you follow the guidelines or not. If you don't follow the guidelines, you might not get paid. You might have to show evidence that you did follow guidelines. There are many things you can do with guidelines, and a lot of them are good if they're utilized appropriately.

In this business of inappropriate use I like to quote Wilson Riles who was director of public education for the State of California who said, "Don't ever do anything just because you can." That is not bad advice for life, as well as for what doctors are going to order or request or suggest. I would add in medicine, don't ever do anything just because you can get somebody to pay for it. That's not a good enough reason. As a corollary, just because you can't get somebody to pay for it, if it's necessary, don't fail to do it.

As those other great philosophers, the Rolling Stones, said, "You can't always get what you want, but you get what you need," and that's really what appropriateness is all about. I give a different speech on laboratory utilization which discusses all the reasons doctors order laboratory tests, many of which have nothing whatsoever to do with what they need. Samuel Johnson in 1734 said that physicians mistake subsequence for consequence. What we need are controlled outcome studies, not experts sitting around saying this is appropriate and that's inappropriate. Process, structure, and outcome are all important, but outcome, in my view, is the most important of those three.

With respect to the management of managed care, there are plenty of doctors, nurses, hospitals, pharmaceutical products, and devices. So why aren't we taking care of everyone properly? It must be managed, which is the recognition, harnessing, and channeling of all available appropriate forces and resources towards meeting defined goals and objectives. I guess managed care ought to take care of all this stuff. That's supposed to be management in care.

Managed care is the application of management principles in a comprehensive, prepaid, health care delivery system. Input and output are controlled to optimize efficiency and effectiveness with the prior consent of providers and patients. That's my definition of managed care. The operative words are comprehensive, prepaid, input, output, efficiency, effectiveness, and prior consent. Here is a megatrend. There were 10 million Americans in managed care in 1982, and in 1992, there were 90 million. In 1998, there were 170 million Americans in some form of managed care.

All types of plans have based themselves on networks of providers. You get alphabet soup, and it changes all the time. Victor Cohn, my friend, the one-time medical editor of *The Washington Post,* says, "If you've seen one managed care plan, you've seen one managed care plan." That's what makes research in managed care so difficult. Where's the control group? How do you keep them from changing while you're studying them? They tweak this, and they tweak that, and then they keep it under wraps. It's very difficult research. But we were able to publish an entire issue on managed care in *JAMA* about a year and a half ago which was interesting. Much of it had outcomes research.

There are five types of HMOs varying by exclusivity relationships between the intermediary and the large managed medical group. Pathologists in anatomic pathology mostly classify disease. If you give them a piece of tissue, they give you a diagnosis, or a category of diagnosis. Some of them like to lump things together. Some of them like to split them up into little pieces. We apply that philosophy to managed care. We recognize that there are 100 different forms of managed care. We come down to two, simple categories of managed care, and I want you to figure out where you are in your health plan as an individual, in your family, and where you are as a worker or a consultant in your health plan in regard to these two kinds of managed care plans.

First, there's a Dr. Jekyll managed care plan characterized by personal, lengthy relationships between doctors and doctors and doctors and patients. It is a population-based approach with population medicine, similar to what David A. Kindig from the University of Wisconsin in Madison has written about in the book *Purchasing Population Medicine*. It's just extremely good and uses your kind of stuff throughout from a physician's approach. It measures outcomes for quality and improves them as they need improvement. There's a primary care specialist collaboration. They talk to each other. Good care equals cost-effective care, recognizing you're caring not only for individuals, but also for a group of people. If you spend all your resources on this patient, you won't have anything to spend on

the next patient who comes in. If there are any profits, they are reinvested into good patient care or lowering premiums. That sounds mighty good.

Then there's the Mr. Hyde managed care plan, with nominal networks of providers that are networks in name only (they don't even know each other, by and large, but they're on some kind of list that somebody threw together). There's indistinct clinical leadership structure. Who's running this train anyway? Who is in charge? But there's little teamwork and they don't even know who the team is. There's cost control by exclusion, rationing, denials, micromanagement, and perverse incentives. By doing less, you make more money. Whether or not the patient needs something may or may not be relevant. Then there have been many profits for many of these companies over the last several years, that go to stockholders after the chief people in charge have taken out their cut which is also very large. I don't like that at all, and I also consider this a transient phase. The profit-taking is going through phases and will be over when the profit is over, as that percentage of the GNP goes down. The huge foundations of the next century are being created out of this. The robber barons of the health industry are taking that money until the attorneys general and the insurance commissioners tell them they have to give it back.

The ancient Golden Rule, "Do unto others as you would have them do unto you," has been replaced by the modern Golden Rule, "He who has the gold, makes the rules." But that only applies for a little while in this field. How many more years? I'm not sure, but I don't think it will be that many. *Caveat emptor*, "let the buyer beware," has an addition: let the patient beware, and you are all patients. Who puts the patient first when push comes to shove in this business of managed care? It is one person—the physician. There is that one-on-one relationship when a decision is made. All health care is local, and it's all done with one patient and one doctor at one moment.

A group of eight of us wrote an 800-word piece that dealt with the subject of how medicine is, at its center, a moral enterprise grounded in a covenant of trust— trust between the patient who must trust and the physician who must be trusted." This is especially important now as we go through the phases of managed care.

What about the future? Someone once said that an optimist is a person who thinks the future is uncertain. That's how we are looking towards the future. William Safire, the great columnist for *The New York Times*, among other things, has said that our diaries reveal our youthful selves to our aging selves. George Anna, the ethicist from Boston, says our genes serve as future diaries to reveal our aging selves to our youthful selves. Do you want to know what your aging self will be like? Soon you will be able to know, through the human gene experiment, and all this

fantastic science that's coming out. You'll soon be able to know how your health is going to play out, except for airplane crashes and accidents.

You will also be able to know what your children will be like at a certain age. Do you want to know that? The stresses and strains that this is going to put upon all of us as people, as scientists, as patients, as actuaries, and as insurance companies! In June 1993, the AMA published research on genetic information, the single most important thing overall that you, as actuaries, need to know about patients to figure out how much retirement money they need or how much life insurance they should get is how much it's going to cost to take care of their lives. In 1993, the AMA said you can't have it. Physicians should not participate in genetic testing by health insurance companies to predict a person's predisposition to disease. The Massachusetts Medical Society stated two months ago that all genetic testing must be voluntary and done with fully informed consent. Results of genetic testing should not be disclosed to anyone other than the tested individual, unless the individual gives separate and explicit written consents for each disclosure. This is the most private of information. You think your sex life is private, but it is nothing compared to your genes. They're really private.

The AMA recently approved this statement: "Health insurance providers should be prohibited from using genetic information, or an individual's request for genetic services, to deny or limit any health benefit coverage or established eligibility, continued enrollment, or contribution requirements, etc." You can't calculate risks if you don't know what the data are. Might that lead to community rating or counting the whole United States of America as one community? Yes, it might. Might it lead to capitation? It might across the board. Genes are very personal. It's unlikely that you'll want to share your genetic information with anybody either.

Outcomes are hard to measure. As a pathologist, I find some of them pretty simple. The expected life span at birth of an American went from 48 in 1900 to 77 in 1990. Bill Fahey with the Carter Center said for every 24 hours we've lived in this century we've added seven hours of life to the average expected life span of an American. That's quite an achievement. We in medicine and public health, etc., have a lot to be proud of.

The Institute for the Future in Menlo Park, California, has identified 12 of the biggest impacts of new medical technologies. I would point out specifically number eight, human gene therapy, although many of the others are also extremely powerful. In terms of having a major change on actuarial science and how long people are going to live, that's the one that has the greatest likelihood of change.

In William B. Schwartz's new book, *Life Without Disease: The Pursuit of Medical Utopia,* he sees a transitional time of medical progress from 2000 to 2020, with the perfecting of many bioengineering techniques that were created between 1980 and 2000, molecular medicine will begin to realize its potential, primarily in genetic screening and diagnosis, a process we will ration widely. We already ration care every day in America. By and large we ration irrationally.

Bill Schwartz says, "Let's work on rationing rationally." The only state that I know that does that is Oregon for the Medicaid population. It's immoral because it doesn't apply to all the people in Oregon. It only applies to the Medicaid population. But it's ethical because everybody was involved in doing it, and it's the best one going at this time. If you want to do something really important for your country, help work on rational rationing. We have to do it in a fair manner. Let's get rid of futile care and medicine to margins where we probably spend $100 billion a year with no substantial benefit for patients. That's where you start rationing.

In the years 2020–2050, Schwartz believes that gene diagnosis, prognosis, and therapy will have advanced to the point that the average expected life span at birth for an American or anyone living in a developed country will be between 120–130 years, although the Census Bureau projects only an eight-year increase by the year 2050. There's plenty of work for you guys in this area if we stop short of community ratings for the country as a whole and capitation for everybody.

Those who heard it will never forget Douglas MacArthur's farewell address to the Corps of Cadets at West Point in 1962. As he came near the close, General MacArthur said that his last thoughts would be of the Corps, and of the Corps, and of the Corps. I say to dedicated physicians that every thought must be of the patient, and of the patient, and of the patient and of groups of patients as a population. That must never change. Let us remember that the government bureaucrats are not the enemies of physicians and other health care workers, and health care actuaries. The enemies are not the federal and state legislatures, the profit making companies, the insurance industry, and certainly not other health care workers. Our enemies are not even the attorneys. The enemies of physicians and all health care workers, are premature death, pain, disease, disability, and human suffering. All the rest is nothing but noise.

Ms. Rappaport: George, how do you see the use of evidence in medicine changing and evolving over the next few years?

Dr. Lundberg: Evidence-based medicine is a big thing. We at *JAMA* and some of the other leading medical journals have always been welcoming, encouraging, and

challenging, researchers to do their research well enough to make it through the toughest rigor and the peer review process and make it in because of the evidence. I believe the literature in the better journals will continue to expand and enhance the quality of evidence available to practicing physicians. That's the first step: Get the evidence. The second step is to apply that evidence-based medicine across the bounds of medical practice, and that, of course, is even harder than the first one because physicians change slowly. Physicians change in ways that have only recently become understood, but it has been my view that one of the great promises of managed care is the promise of managing physicians to get them to do the right thing when they want to do the right thing. Managed care can help that and often does. Physicians do change practice and improve practice. They're tremendously into continuing medical education. They want to learn. They realize they're students for their entire life, and they want to do the right thing. So, I believe converting evidence-based thought into evidence-based practice is realistic and likely.

An interesting play-out of this will start coming this fall when all ten of our *AMA journals* will emphasize alternative medicine. It is called unconventional medicine or complementary medicine. In November 1998 we'll probably publish something like 100 evidence-based articles on the so-called alternative medicine area. Our basic position will be that there's no such thing as alternative medicine. There is evidence-based medicine, there's nonevidence-based medicine, and there's in between. We don't know. Some have been proven not to work. On the other hand, in a society that values patient autonomy greatly, patients can do it if they want to, and, by and large, they can and will, unless it's something that's really going to hurt them badly. Then you try to prevent them from doing it. The next best test of evidence-based medicine applying it across scientific medicine, Eastern medicine, traditional medicine, and alternative medicine, and putting them all in one gemish, sorting them out based on evidence and no evidence.

Ms. Joan P. Ogden: Let us suppose you are appointed dictator. What are the first two things you would do to change the system?

Dr. Lundberg: I would provide access to basic medical care for all of our people, and if access to medical care is related to health insurance coverage, I would provide health insurance coverage for all of our people. The Congress just voted for a $200 billion expenditure to build roads and repair some bridges. I like roads and bridges. I drive around a fair amount. They didn't say, "Maybe we ought to cover the uninsured with that kind of money," which they could have done. Although incrementalism is moving somewhat, the Kassebaum-Kennedy bill, was seen by most of us as just kind of trivial at the time, except for the number of health care fraud investigators put out there which was not trivial. In terms of covering people,

it didn't happen. When I left Chicago, 20 states had passed kiddie care legislation, which is better than I thought they were going to do. I thought it was set up in such a way that they wouldn't pass it so it would have to revert back to HCFA to implement it. First would be access to basic medical care for all of our people and if insurance is necessary to do that, then we should do whatever's needed. Second, I would put a government ceiling on health care expenditures in our country. I would hook it to the percentage of the GNP, and index it by inflation, for government spending. I would let individuals spend their own money any way they want. And I would let companies give health care coverage over and above basic coverage. I'd put a ceiling on what the government could spend, and I'd probably find out from Oregon how that rationing happened. That would work for the next 10–15 years. After that, I'm not sure, because of the gene explosion and the talk of expected life spans at birth of 120–130.

Mr. Richard W. Garner: You spoke of lengthening life spans. Will those years be spent in generally good health or poor health?

Dr. Lundberg: They will be spent in good health without heart disease, without arthritis, osteoporosis, cancer, and chronic obstructive pulmonary disease once we get rid of the tobacco industry. The genes can cause those diseases, but it's also an environment thing. There will still be plenty of alcoholism, but people will mostly be in good health. You have to figure how long people are going to live and to work. I was at a meeting in Paris a month ago funded by UNESCO, which was all about quality of life and health in an era of longevity. People from all over the world were talking about it. Bill Butler from New York was one of the leaders of it, and so was a fellow from Paris. We were really talking about this kind of stuff in very serious ways. My part of it had to do with good communication—its value and its purpose during an era of longevity. That presupposes good health for most folks until aging takes over. We believe that we are genetically predispositioned to die. Could that also be changed? I don't think so, but I don't know that. Think in terms of decades of productive life or a whole lot of leisure time while somebody else is earning the money to take care of you.

Ms. Rappaport: The 120–130-year lifespan is interesting. The expert panel for our social security mortality improvement research predicted a maximum life span of 135 years.

From the Floor: I believe the reason we have so many problems in health care is because information is not symmetrical between physician and the patient. To eliminate the problem I believe that we have to install what I call outcomes measurement or an outcome management system to measure physicians'

performance in terms of outcome. How do you see the possibility of having such a system widely accepted and in place?

Dr. Lundberg: I believe individual physicians' outcomes are being measured and will be measured to a greater extent. Groups of physicians' outcomes will unequivocally be measured as groups and that information will be made available rather easily. Individual physician outcomes are much more sensitive, and physicians tend to do what they can to prevent access to their own outcomes. But places like New York State have been able to countermand that and make individual physicians' information, particularly surgeons for coronary bypass graphs and so forth, available on a physician-to-physician basis. Report cards of performance, will continue to increase especially in a place like the state of Pennsylvania, but the main questions are, who will collect this information and how will it be made available?

Health care companies have a major fundamental conflict of interest in terms of collecting the information on the outcomes of their companies, beneficiaries, their physicians, and their plans, because they're in intense competition with others and want to market their product. In general, I don't believe anything, a company, a hospital, a health care plan, or an insurance company tells me about the outcomes of the area that they're responsible for. I will assume they're lying or fudging things enough to consider it a little white lie. It's advertising, so why would you believe that kind of stuff anyway? So, it needs to be a third party and we don't have that in America at the moment. Two Harvard professors did a piece in *JAMA* about a year ago proposing that a group be created in Washington to do the collection of quality data in some nonjudgmental way and then distribute that information. I'll have another piece by one of those authors fairly soon taking that argument to the next step. The AMA and Linda Manuel at our Ethics Institute in that same issue of *JAMA* did a balancing editorial suggesting that the AMA do that through the Institute. Up to this point there have not been any steps to make that happen. The AMA is revered by some, hated by others, respected by some, and not trusted by others. Some would say that you can't believe that the AMA would do that for others. They would say that it is going to lie to cover its members. There is some truth to that, although there are ways to cushion it. I think there will be ways to do what the questioner said. We aren't there yet. The framework is laid out for ways it could be done.

Ms. Rappaport: Some people have suggested there's a role for actuaries in certifying some of these statistical studies in the future just as we certify reserves. The Society is doing some research on what you have and what you do not have. There are HEDIS indicators and hope you'll all look for the results of that.

From the Floor: The amount of health care the American people receive is a function of the amount of resources or money spent on that health care and the price per unit delivered. When I was a child, I remember doctors doing house calls and having evening hours. The typical doctor in the community drove a Buick or an Oldsmobile. Today, finding a doctor with evening hours or who makes house calls is impossible. The typical doctor in the community is working fewer hours and driving a Mercedes or a Lexus. Back in the 1950s, the underinsured or the uninsured very often were treated gratis, as a charity case, by the physician. Today, it's a very different situation. Could part of the problem be the physician's expectation?

Dr. Lundberg: I agree with many of your statements. I don't agree with all of them. Each one of them is a subject for all sorts of discussions. I talked about the problems with physicians today but why should I talk about what's wrong with doctors? You all know what's wrong with doctors. You experience it every day. I finished medical school in 1957, and stopped defending doctors as a group in 1958. On the other hand, as professionals, I can't think of a better group in terms of what they do and what they've accomplished. They do awfully well in many ways. I'm very proud to be a physician, but that doesn't mean all physicians behave that way. It's complex sociology.

I'd like to address the accusation that physicians work shorter hours. As a matter of fact, the average physician in America who is in practice in 1998 works a 58-hour week, and the average physician in America in practice 15 years ago worked a 58-hour week. Based upon all the good survey information, the belief that they work shorter hours is simply untrue.

However, we have much more diversity in medicine now than we had even ten years ago. There is especially male-female diversity. The average medical school graduating class in the U.S. will have 35–40% women. Many have 50% women. And a few have more than 50% women. There's good evidence that women, by choice, work fewer hours per week, and some people say that women are our salvation coming into the field in large numbers when we have an oversupply of physicians. All of a sudden we get these large numbers of people who want to work fewer hours and who will work fewer hours, and that's good. It's a matter of lifestyle and choices, and that's just fine.

In terms of giving away care, the data shows that about 67% of American physicians in the practice of medicine give away care for free, and the average they give away is 12% of their time, which is more than the Christian 10% tithing. One-third of American physicians don't give away any free care. They don't even try to write it off if people have nothing. They hire bill collectors to go out there and take

whatever they can get. We professionals consider them unprofessional because one of the definitions of a professional is someone who gives free care to people who are in need. If you, as actuaries, want to call yourself professionals, you should be giving away free services to somebody who needs them and not asking them to pay up to a certain percentage? If you don't, stop calling yourself professionals. That's one of the fundamentals. When you deal with somebody in need do you take care of that need without worrying about your own self-interest? Lawyers do. Priests do. Many teachers do. Two-thirds of physicians do. In theory they all should, and I wish they did. It would make my life a lot easier.

We have plenty of doctors, and we're turning out 16,000 more per year out of our medical schools, even though we don't need them. Some 50% of the physicians going into residency training programs in 1998 are international medical graduates from other countries. In a market other than a strict managed care market, more physicians means more care, which means more money, not less. Standard rules of competition don't apply until you get into a strict managed care environment. They probably do, but you've got to do it for the whole country before you can be sure.