Interview with Kathy Lohr
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Conducted by Edward Berkowitz

Berkowitz: Let me start by asking you a little bit about yourself. To look at your vita, it looks like we have a very traditional pattern. You got a degree. It looks like you wanted to be a teacher maybe and then something happened and you changed careers and had a second career later. Is that right? Is that what happened?

Lohr: Not exactly. I had a teaching degree from Stanford following a sociology degree, but my first husband was a medical student at Hopkins. When we moved from California to Baltimore, I actually ended up working as an editorial research assistant in the Department of Medicine at Hopkins, and I never left, if you will, health care after that. In the intervening years I had two sons. Then we moved back to California and I went to work at the RAND Corporation. I had some wonderful support from leaders in the field of health services research, in particular Bob Brook, Joe Newhouse and a whole array of other people who at the time were working on the RAND Health Insurance Experiment, which is widely regarded as the largest and the most influential and ground-breaking of any of the social experiments that have ever been done in this country. They nagged me mercilessly to go back

to school and get a PhD. RAND at the time had a graduate school (then called the RAND Graduate Institute), which admitted about six or eight people a year and usually took maybe one, maybe two, people from the staff at RAND. So I applied and was accepted, and that's where my PhD came from. RAND has a very unusual program in public policy analysis, in my class I was the only person who did anything in health. Various things happened such that I was divorced and then remarried about four years later and acquired three stepchildren. I transferred from the Santa Monica office of RAND to the DC office and worked there for about eight years, again mostly on the Health Insurance Experiment but also on a variety of other projects largely having to do with Medicare and quality of care. I've had a long career in issues relating to the old EMCRO [Experimental Medical Care Review Organizations] programs which were the precursors to the PSROs [Professional Standards Review Organizations] and then Peer Review Organizations [PROs], which were the state-based private entities that review quality of care for the Medicare program. The EMCROs also did the same thing as well for the Medicaid program.

Berkowitz: Are you from California?

Lohr: Born and raised. I was born in North Hollywood near Los Angeles, but I was raised in a little town called Chino which is out toward the Pomona Valley area. I lived in one of those

idyllic places. We lived seven miles from the nearest town. I had a horse and thousands of acres of essentially cattle ranch land around us. It didn't belong to our family but we had access to ride all over it. I had a swimming pool, and we were near the mountains and an hour and fifteen minutes from the ocean. It's a great place.

Berkowitz: So when you went to Stanford you studied sociology but not particularly in health?

Lohr: Oh, no, not at all. Just sociology. It was a major picked deliberately because it had no requirements for having a minor, which left me a lot of credits to get what was a classic liberal arts education. And I had the opportunity to go to Stanford in Germany, which was a very special six months—two semesters, the summer between my junior and senior year and the first quarter of my senior year.

Berkowitz: And you got this MAT, right, masters in teaching?

Lohr: Oh, no, it was a Masters of Arts in Education. It was a straightforward Master of Arts degree in Education and also happened to be a special program in the School of Education at Stanford, which let you get a secondary teaching credential. So I actually had a teaching credential in history.

Berkowitz: Were you going to teach American history?

Lohr: Yes, it would have been American history, world

history—whatever you teach at the high school level for 10th, 11th and 12th grades. But I didn't find that as appealing a career in thinking about moving to Baltimore and being a new teacher, so I reverted back to type. I always have been very much involved with writing and editing, so I was able to find a job with Dr. Larry Shulman, who is now the Director Emeritus of the National Institute on Arthritis and Musculoskeletal and Skin Diseases. He was at Hopkins as head of what they then called the Connective Tissue Division of the Department of Medicine in the School of Medicine. He was a terrific boss and really gave me a lot of opportunity to do good work, I thought. I had my first son and stopped work for awhile. I actually worked at home typing—back then physicians dictated their notes and you transcribed them.

Berkowitz: They *still* dictate their notes.

Lohr: So I worked at home transcribing medical dictation and then went back to work part-time, then in the Department of Pharmacology and Experimental Therapeutics. I worked part-time for a nephrologist who did work in ion transport across kidney membranes, a fellow by the name of MacKenzie Walser, who was considered one of the best in his field, really trying to understand how medicines might cross various barriers. I was really just a research assistant on literature review.

Berkowitz: Where did you live in Baltimore?

Lohr: Mostly in the compound. I lived in Baltimore for nine years. Of that, the first year was in the 550 Building, which was directly across the street from the old main entrance to the hospital.

Berkowitz: Where was your personal house?

Lohr: We lived in apartments. Three years in an apartment out east of town and then back to the compound. The compound was the quadrangle of two-story houses that was down the hill from the old main entrance, toward the city. It's torn down now.

Berkowitz: Where the outpatient department is, right?

Lohr: That I couldn't say. It's down the hill if you're standing in front of the dome and looking back toward town, then the 550 Building is on the left and there's a dorm on the right. The nurses' dorms would be over to the right. The compound was further down the hill. And for three years I lived at the corner of Jefferson and Wolfe in a second-story apartment.

Berkowitz: It's really grim now, probably was then, that whole neighborhood.

Lohr: It's less grim now, I would have said, than it was then. Among other things—the building that we were in had been made out of two row houses and there was an alley that ran behind it. This one corner apartment, which had a main floor, the second floor that we had, and then a kind of attic-y one-bedroom type

apartment, all people connected with Hopkins. There were considerable problems with rats back then, so we actually got involved with the local community development agency—back then they had neighborhood health centers to try to work to help deal with problems like that.

Berkowitz: When did you learn math? Or did you ever learn math? You must have to go through that public policy school. You'd have to learn how to run a regression.

Lohr: That's not math.

Berkowitz: Statistics?

Lohr: I'd never had calculus in school, so I took a crash course over the summer in a little bit of calculus, because RAND's program is highly quantitative. I was not particularly well-equipped, mathematically speaking. But I had two things going for me. One was that both the people who taught microeconomics and the people who taught statistics were gifted teachers, two statisticians in particular. One is John Rolfe and the other is Carl Morris. John is still at RAND, I believe; Carl is at Harvard now. They had a gift for teaching, regression in particular, but also just statistics generally, that didn't make it seem so foreign even though, obviously, they were teaching it at a very high level of sophistication and quantitative background. Similarly, there were a couple of people who were

really very good about teaching micro-economics. I also had two or three very helpful co-students, classmates or one year ahead of me, who took me under their wings and tutored me a bit in the things that I didn't know. Math and statistics was by far the area that I was the least equipped in. But if you do it enough and come to really understand the basic principles—well, it's always stayed with me, both the basics of regression and that sort of thing.

Berkowitz: So if someone asks you what is heteroskedasticity, you just know, right?

Lohr: I would *now*. I certainly did then.

Berkowitz: Some people never make that transition. So you went to California again and looked for a job and found a job at RAND. Is that how it worked?

Lohr: No.

Berkowitz: When did you go back to California?

Lohr: Essentially June of '74. We left Baltimore in '72. My first husband was a physician, but he was under the Berry Plan at the time, which meant that he needed to give two years to the Public Health Service in exchange for not having been drafted to go into the Vietnam war. He went to the Office of Smoking and Health and worked there. That was in the Bethesda area, so we moved to an area right near Kensington, Silver Spring. What had

happened is that, while I was pregnant with my second son, he [my husband] got an international clerkship through what I think was then the Commonwealth Fund and we went to Chile. I guess I was there about five months and he was there a little longer. I had to come back so that I didn't get caught in Chile having to stay and have a baby there.

Berkowitz: Santiago? That's nice. Good fish there in Santiago.

Lohr: Yes. Oh, it was a wonderful, wonderful time. We were there in the last year of Eduardo Frei's presidency. The next year was when Allende was elected. The health establishment in Chile was exceptionally sophisticated, very forward-thinking in terms of issues about public health and so forth. A very, very fine group of people. They were probably leftists, a lot of them, but just remarkable people. They were really headed down a path that would have put Chile's health system, for what was then a developing country, really on the map, when the coup came and Pinochet had Allende assassinated. Some of those people were out of the country at an international conference when the news came through of the overthrow and the coup, so they were safe, although there was a lot of concern about their families, and there were a number of people who were imprisoned. So there was an effort by certain parts of the public health establishment in this country to put a lot of pressure on our government to ensure

that there was pressure put on the Chilean government to release those people. Some did get out. Chile is a gorgeous country and I'd go back in a minute. I worked for people in the Department of International Health in the Hopkins School of Public Health. A physician by the name of Tom Hall, who's an expert in health manpower, and his wife then, a psychiatrist, Francoise Hall, who had been doing work on issues relating to Chilean men's attitudes toward contraception and abortion and was doing a fairly substantial survey, I think supported by AID [US Agency for International Development]. Actually I worked for her translating her questionnaires and doing some background reading and literature search. We lived in their house for a month when they went back to the United States on home leave. It was a fabulous time. But I came back and then had the baby and went back to work about three months later part-time in the Department of International Health at Hopkins. There we put together a textbook on health planning that I helped to co-edit. I did an annotated bibliography on health economics issues. This would have been in about 1970 to 1972. I did a lot of work on what was then referred to as "foreign medical graduates." So I did actually a fair amount of stuff relating to health manpower. When I left there in '72, I went to work for a woman by the name of Betty Lockett in what was then known as the Division of

Manpower Intelligence in the precursor to the Health Resources and Services Administration. HHS—it was then HEW—has this way of reorganizing itself. It probably would have been the agency referred to as HSMHA [Health Services and Mental Health Administration]. Our offices were in Building 31 at NIH [National Institutes of Health]. Betty had a small office that was the Office of International Health Manpower in the Division of Manpower Intelligence which was in a bureau that was concerned with issues related to the health professions. That division was responsible for doing all the health manpower projections in this country, supply and demand, and we had the part, among other things, of tracking what was going on with foreign medical graduates and to a much, much lesser extent, foreign nursing graduates. I was just trying to understand the flows, where people were coming from, what types of visas they were coming in on, that sort of thing. I did that for two years. Then we moved back to California because my husband took a pediatric residency at Harbor General Hospital down near Torrance that is affiliated with UCLA. What had happened is that my boss-one-removed, a fellow by the name of Wil Lybrand who was the head of that division [Division of Manpower Intelligence], had a very good friend by the name of Al Williams who was then head of the health program—and a very fine health economist—at RAND. He sent my CV

to Al. I, in the meantime, had already been looking for a job at UCLA and had something at least tentatively lined up with Lester Breslow. We're talking here a real fork in the road, because what happened is that Wil sent my CV to Al Williams, who gave it to Joe Newhouse who was the principal investigator for the Health Insurance Experiment, who sent it back to Bob Brook who at the time was doing his Berry Plan service at the National Center for Health Services Research, but who was going, as soon as his two years were up, to RAND to become the medical director of the Health Insurance Experiment. So out of the blue I get a call from this Bob Brook, whom I do not know from Adam, who says would I come, please, interview with him, and he explained who he was. I figured I would go and talk to him. He was sort of a tough interviewer but kind in his own way, and I just didn't really imagine anything much would come of it. About a day later I had a phone call from the personnel office at RAND asking if I would take this job with Bob. I was just astounded, because it truly came out of the blue. I said I needed a day or so to think about it, but, having been born and raised in southern California, I had heard about the RAND Corporation and it was this think tank where only the best and the brightest went. My general view was that no one in their right mind turns down a job offer out of the blue from the RAND Corporation, so I took it.

Berkowitz: Santa Monica, is that where they are?

Lohr: Yes. And it was a wonderful, wonderful time, in part because of the Health Insurance Experiment and the set of people who were there for this very long period working on this huge study—giants in the field.

Berkowitz: When I think about this Health Insurance Experiment, I think about a time when the Assistant Secretary for Planning and Evaluation at HEW generated a number of social experiments. They had a bunch of these social experiments in the 1970s, the most famous one probably being the negative income tax experiment. But there also was this Health Insurance Experiment which I know less about. Was the idea similar to the negative income tax in that you give people various types of health insurance and see how they react? That's over simplifying, I'm sure.

Lohr: That's over simplifying. Essentially the Health Insurance Experiment was a randomized clinical trial. That's one thing to remember. None of the other social experiments came close to being as scientifically grounded in the study designs that make for the strongest possible ability to draw inferences. We ran a health insurance company. In five sites around the country—Dayton, Seattle, Fitchburg/Leominster area of Massachusetts, Charleston and Georgetown County (which is the very rural county northish of Charleston) and we had several

different kinds of health insurance plans that included both physical and mental services broadly defined as well as dental insurance. These plans went all the way from essentially free care all the way through to a series of plans that had fairly substantial out-of-pocket costs. What we did was essentially to invite people who met certain sorts of criteria, not including the elderly, to accept this health insurance and then be in this study for either three or five years.

Berkowitz: Through their employer?

Lohr: No, no.

Berkowitz: They were all sort of self paying? Did they pay anything?

Lohr: Well, if they had one of the plans that had out-of-pocket payments, then that's what they were responsible for.

Berkowitz: But who paid the basic premium?

Lohr: The study did.

Berkowitz: Everyone got this free. Would that have biased all the results?

Lohr: Well, not exactly. Just to finish the structure, there were some "hold harmless" provisions, because you were asking people to essentially put their own health insurance into what amounted to escrow. Their existing health insurance, if they had any, was maintained, so that at the end of the study they could

return to it. The premiums were paid by however they were normally paid for their existing health insurance, and then we essentially replaced that insurance with the kinds of plans that we had. In addition, we had in Seattle both a random selection of people who belonged to the Group Health Cooperative Puget Sound and also a group of randomly assigned people who *didn't* already belong to Group Health. So in Seattle you had, if you will, fee-for-service indemnity insurance, people who had been randomly assigned to Group Health, and then what amounted to Group Health controls, people who were already there. Then we did just a huge amount of base-line questionnaires, physical exams, that sort of thing. About 60% of the sample was in the study for three years, the remainder for five. When they exited at the end of whatever their term was, there was another substantial round of questionnaires and physical exams. In addition, we did a variety of other questionnaire-like things and activity diaries over the course of the time that the people were enrolled in the study. The experiment started, in the sense of enrolling people, probably in '74 and the last people were out of the study in '82 because it was a rolling period of participation. The last sites were in South Carolina. We were not enrolling them until about 1977, so the people who were five years in South Carolina were just finishing up in about '82.

There was just this immense amount of data and a lot of health insurance claims-based data. We had designed our own special insurance claims that got us a lot more information than in the typical claims to this day.

Berkowitz: It was funded by HEW?

Lohr: It started out actually in the old OEO [Office of Economic Opportunity] office, I think it was. A fellow in that office by the name of Larry Orr worked with the people at RAND to really shape the experiment. There had been about three years of non-experimental analyses done by Joe Newhouse and Chuck [Charles] Phelps, who's also a very eminent health economist and now Provost at the University of Rochester, and some of the statisticians. Frank Sloan, now at Duke University, also was involved in those early years. I think he had been at RAND before I got there.

Berkowitz: So now there are lots of results that you got. One thing you would hypothesize was that the people who had to pay less actually used more of the services. The negative income tax experiments had a lot of interesting counter-intuitive findings, for example, that if you got paid this money that it increased the rate of divorce. Things they weren't expecting to find. Were there things like that in the Health Insurance Experiment? What did the results show?

Lohr: I wouldn't have said that there were any staggeringly counter-intuitive findings. I think the basic findings were that cost-sharing reduces the use of services essentially across the board. There were a lot of innovative analytic techniques that were used because it began to become clear that in order, for instance, to understand differential rates of hospitalization, you needed to partition your analysis on who had had, say, outpatient visits within some prior period of time. The reason is that if you just study hospitalizations alone you'll get odd results. You really need a pathway of going through outpatient care to understand the impact (of cost-sharing) on hospitalization. I guess I'd be inclined to say that the main impact of cost-sharing with respect to hospitalizations is actually muted, because the real impact is on the use of outpatient services, leaving aside emergency room care.

Berkowitz: How about health outcomes?

Lohr: Let me just finish with one of the utilization findings because that was the stuff that I was most involved in. We did a lot of analyses looking at the diagnosis-specific outpatient services for both adults and children. What emerged out of that was a clear pattern that you would see use of fewer services as the rate of cost-sharing rose. With fee-for-service versus pretty much any cost-sharing, you'll see less use of services

(with cost-sharing). We then went through a fairly elaborate exercise of trying to understand, for given diagnoses, what was an appropriate and effective set of services for handling that particular kind of problem or managing patients with that sort of diagnosis. And then what were essentially ineffective kinds of services that might appear in conjunction with managing patients for those kinds of problems. What you ended up with was that cost-sharing essentially is a very blunt instrument for trying to reduce the use of ineffective or unnecessary services. You pretty much saw a reduction across the board in the use of both ineffective as well as necessary and appropriate and effective services. What might have been regarded as something of the common wisdom then—that if you had people pay something out of pocket they'd be more sensitive to the nature of the services that they would use and they would only be using services when they needed them and they'd only be getting appropriate and effective services—[was not correct]. In fact, what you saw was a reduction in both ineffective as well as effective services.

We did a lot of work looking at adults separate from children and then controlling for income and what-have-you. It was quite clear that cost-sharing had a much stronger effect on, particularly, low-income children—just a catastrophic drop in the use of services, clearly services that were needed as well as

services that weren't that you didn't see so much for kids with higher income. So you did see effects of cost-sharing differentially strong on poorer people and on people who were sick. I think that those are lessons that hold to this day in a way.

I think it is well—and I don't know who all you've been talking to—to recognize that the common era of measuring health status and quality of life in effect can be traced to the Health Insurance Experiment and the set of people there who developed the original questionnaires for measuring health status—led by Bob Brook but including John Ware and Anita Stewart and Cathy Donald Sherbourne, Alison Davies. I was involved with this large number of people who developed what were then the finest set of health status type questionnaires that existed, mainly for adults. But we did, I think, some pioneering work in trying to develop questionnaires appropriate for children as well. Then, in addition to all those sorts of data on health status that were self-reported, we had insurance claims and all the diagnostic information that we made sure was on those claims. We had a physical exam at the beginning and the end of the study. There was a lot of health data available.

You saw less effect on health status from cost-sharing versus fee-for-service than you did on utilization of services,

with certain exceptions. Among adults the most well-known results have to do with the fact that for adults who were hypertensive and for those who had vision problems being on a cost-sharing plan did have some negative effects on health. Actually the analysis goes the other way: being on a free plan gave you better health status results. On the kids we were able to show far less in the way of impacts on children's health. I think there are several reasons for that. One is that kids tend to be generally healthy; it's a relatively small sample and you're not likely to see very many kids with, say, chronic diseases and being able to say what effect insurance is having on them in just a period of three years. We didn't really detect as much in the way of long-term health effects for children as for adults.

The HMO data probably remain controversial to this day. In general, it is probably fair to say that people who were in the HMO, either RANDomized in or already there, didn't have detriments in their health relative to the fee-for-service free care plan, but when you parsed it out in terms of people who were sick and low income, you began to see, or at least those were the analyses that were reported in *The Lancet*, potentially deleterious effects of belonging to the HMO as contrasted with being in the fee-for-service system *and* on the free plan.

Berkowitz: That's a very interesting finding in retrospect. The other stuff is gone, we don't have any of that anyway. But that one is very interesting. That's *somewhat* counter-intuitive at least to what the HMOs say. We've gotten fewer heart attacks because of all this preventive care that they have.

Lohr: Again, you're looking at some of the same kinds of things to be measured, effects on people who had certain kinds of chronic disease, effects on things like vision. For the things that had been measured in the fee-for-service portion of the study, which is to say free care versus cost-sharing, the same comparisons were made. All I'm really saying is that when you started to get to people who were sick or of lower income, it would appear that Group Health—a group and staff model HMO and, indeed, one of the finest in the country—didn't manage some of those patients as well. There was a lot of speculation about whether it wasn't so much did they or did they not do prevention kinds of things as perhaps whether people, particularly people who had been RANDomized in and hadn't elected themselves and already chosen to belong to an HMO, found it difficult to negotiate what it is you have to do to manage in that sort of HMO.

Berkowitz: That fits with the Group Health in Washington. I remember that the richer people are smarter about, in the

situations of rationing care, getting to the doctor.

Lohr: That's a hypothesis. You've got low-income people who may not have access to phones.

Berkowitz: Or didn't ask for extra stuff. That's very interesting. Has that been followed up on?

Lohr: It was followed up. Obviously, that was a very controversial set of findings, but it led directly to the conceptualization of what became known as the Medical Outcomes Study, of which John Ware was the principal investigator for many years, together with Shelly [Sheldon] Greenfield who was also a physician, general internist, at UCLA and RAND, who had somewhat less to do with the Health Insurance Experiment but did get brought in to help conceptualize the Medical Outcomes Study. I didn't work so much on that study. By that time I was in DC and they were moving ahead with designing that, which was supported largely by the [Henry J.] Kaiser Family Foundation, I think, and probably some other foundations and the government along the way. But the Medical Outcomes Study, although completed some years ago, is still producing all sorts of interesting results, some of which have just been reported in the last year or so in *JAMA*. From the health status questionnaires that were developed originally for the Health Insurance Experiment, John, who was the leading psychometrician on the work in the Health Insurance

Experiment, then took a lot of those instruments—and they were quite long—and worked hard to reduce them down to something shorter that isn't so formidable for patients to self-report on. Eventually one got to be what's known as the SF 36, SF standing for Short Form, which is arguably now the best-known health-related quality of life measure in the world, but its provenance goes through the Health Insurance Experiment and what was done to develop those instruments. They weren't completely developed from scratch even by those of us at RAND, because there were existing batteries of various sorts of questions: the activities of daily living questions, health risk and health behavior questions, batteries of questions on mental health that date back into the '60s, I guess. It was the pulling it all together and really developing a unique set of instruments [that was so important to the field] as well as [creating] a whole separate set of instruments, some on patient satisfaction that John Ware had developed when he was a student getting his PhD at the Southern Illinois University. He had developed both patient satisfaction questionnaires and what became known as the General Health Perceptions questionnaire under contract to the National Center for Health Services Research. He'd probably done that work in the early '70s and probably into the mid-'70s because I think he came to RAND in '75 and he may have still been just

finishing up that work at the time. As a digression, the reason for saying you should talk to my husband [Bill Lohr], is that my husband is the one at NCHSR who pushed for this work to be done and supported by NCHSR, and then he was John's project officer through all that developmental work. So there are circles within circles in the health services research field, and that's one of them.

Berkowitz: Now tell me about the health services research field before we get to your going to Institute of Medicine. Were you in that field by 1980? Would you have said that you were?

Lohr: By the time I ended up at RAND, I was in health services research.

Berkowitz: Was there a field? Was there an association whose meeting you used to go to? That didn't start until later, right?

Lohr: That started later. AHSR [Association for Health Services Research] is just now celebrating about its 16th anniversary, so it started in the early '80s.

Berkowitz: Did you go to the first meeting?

Lohr: No. I couldn't even tell you why I didn't. No, I probably didn't start going to AHSR until '85 or thereabouts.

Berkowitz: What was the draw? Did you want to present your results?

Lohr: Why I might have started going is sort of lost in the mists

of time. I was a relatively junior person in the late '70s. I was a researcher with a bunch of people who *were* stars. I had two kids and then starting in '78 I had five kids. There are only so many ways you can slice yourself. I used to, in the '70s in particular, go to the meetings of the American Public Health Association, which had a section called Medical Care. That was the closest thing there would be to health services research. And then there was kind of a rump group called the Committee on Health Services Research. People who were actually health services researchers organized discussion groups on the Saturday or Sunday before APHA would start, because the Medical Care section didn't quite get it with respect to what health services research was. I think probably what happened was that eventually there was enough of a cadre of people who saw themselves as doing something different or having different interests than APHA had, because they weren't into the public health stuff *per se*. They were into the core of what we see as health services research.

Berkowitz: They wanted to talk about how to control mosquitoes, but you wanted to talk about utilization.

Lohr: There were people in the field, I think Stuart Altman, Clif Gaus, probably Gordon DeFriese, John Wennberg and others—and I think Bob Brook probably had a role in this too—who said, "We need an organization of our own." And that's what prompted them

to start up AHSR.

Berkowitz: Which has its own journal now. You're pretty much a big player in that. You're an officer?

Lohr: I've been on the board for six years and I'm up for election as the treasurer this year.

Berkowitz: You've already got this on your vita. Is this a done deal?

Lohr: I think it's there as "treasurer designate" or something. It's probably a done deal just given the way the officers of AHSR are selected. There is general election to the board and then the board nominates people for election to the officer slots. Anybody can put up other people, so it's not closed. You can always write in names, but as a general proposition the slate of officers is elected. It's like proxies for mutual funds. Somebody has nominated a slate and it's either approved or disapproved, as contrasted with election to the board, which is a real election by the entire membership.

Berkowitz: At some point you got elected to the board, so you must have become known to somebody or become a player in the field.

Lohr: Somehow. I was thrilled, I have to say, absolutely thrilled when I was elected.

Berkowitz: What does it mean, I see here, to be a "1996 Fellow"?

Lohr: It was decided—and it may have been under discussion in 1995 but certainly in 1996. The board, in 1996, discussed whether there were now enough people in the field who could be recognized for being outstanding in the world of health services research, that there should be established some kind of recognition. So they started a kind of "Distinguished Fellows" group, which are the really big muckety-mucks, and then there's a set of "Fellows," and they elect probably about forty a year. It's not a particularly complicated process, but it's essentially something that is done partly by the board and partly by a committee of people who now are themselves Fellows or Distinguished Fellows. They just started that; there's probably now about 100 Fellows and there'll be another crop this year. It's just a way of trying to convey to the world that health services research is a recognizable field, [and that] the Association is an established professional association, largely oriented towards membership services but with an important role in lobbying for the field of health services research and then also lobbying the Hill for support for specific agencies that fund health services research. Not only NCHSR and now AHCPR, but also HCFA [Health Care Financing Administration] in the Office of Research and Demonstrations—that part of HCFA that does financing and organization kinds of research on the Medicare and Medicaid

programs. But there are a number of other agencies that support health services research, [such as] the three national institutes that spun off of SAMHSA [Substance Abuse and Mental Health Services Administration]. The three elements spun off back into the National Institutes of Health were the National Institute for Mental Health, the National Institute for Drug Abuse, and the National Institute for Alcoholism and Alcohol Abuse, NIAAA. Those three national institutes have 15% set-asides of their budgets to be used for what is to be referred to as health services research. The other agency that has a substantial health services research role is the Veterans' Administration [now, Department of Veterans Affairs]. They have this HSR and D—Health Services Research and Demonstration—program that essentially only funds within the VA, which is to say you need to be at least a five-eighths VA employee in order to get that support from the VA. They support a lot of centers in various kinds of health services research, and much of the work, of course, is done on VA patients and in VA hospitals.

Berkowitz: That's an interesting way of looking at the field.

Lohr: There's a number of agencies and, of course, there are things that you might contend are clearly health services research done even by certain other parts of NIH: cancer; the National Eye Institute, which is by all odds ahead of the rest of

the institutes in terms of its use of health data and quality of life instruments; NIA, Aging does a lot of things that would be seen as health services research.

Berkowitz: And also Child Health and Human Development is traditionally different because it started out a little bit different.

Lohr: Yes. And then NHLBI [National Heart, Lung and Blood Institute]. They may be supporting work that is recognizably health services research. My view is they tend not to acknowledge as much that that's what it is. But little by little they're sort of getting pulled into doing less—well, I shouldn't say less, obviously it won't be less—in the way of biomedical research, but rather broadening their understanding of what has to be studied. Basic science and the lab and bench science kinds of work are obviously very important in this country, but we need to know a great deal more about what sorts of services are effective and how best to deliver them and how to involve patients in their own care—a whole class of things that fall within the rubric of health services research.

Berkowitz: How were you recruited to the Institute of Medicine?

Lohr: I knew Karl Yordy from I couldn't exactly tell you how and when, but—I assume you must have spoken with him.

Berkowitz: Actually I haven't. He's one of the people reading

this manuscript.

Lohr: Well, you should because he had been the executive officer in the early years.

Berkowitz: Until Fred Robbins came along.

Lohr: And then he became the Director of the Division of Health Care Services and had a very long and fruitful career at the IOM. And I knew him from *somewhere*. The way you get to know people if you live in Washington long enough. He contacted me two or three times to come to the IOM, but I wasn't done with the things I felt I needed to be finishing up at RAND, particularly the last sets of analyses and writing up results. I was one of the last people still on the HIE payroll as much of the work ended and people went on to other things. And I was also the co-PI on a project having to do with hospital mortality rates with Mark Chassin. He had a long and separate career which we could talk about. But in any event, I'd been in the Washington office of RAND for close to eight years and virtually all of my colleagues were in Santa Monica. It was great when it was the Health Insurance Experiment because these were people I'd essentially known for four years. We had very close ties, personal *and* professional, and it was easy to work with them. There are still a number of people dating from way back then who are very close personal friends. But it gets hard to work at long distance for

that amount of time, and it gets harder as you become more senior and you're responsible for writing your own grants and bringing in your own money without the support cadre that you can just walk down the hall and talk to. To do all the work at long distance with a three-hour time difference, that sort of thing, was tiring. So what happened is that in the bill known as OBRA 86, the National Academy of Sciences was mandated to do this study on quality assurance and Medicare. Karl was responsible for negotiating with HCFA to get this study supported and it took a long time. He was in touch with me about whether I could be persuaded to come and direct that study. In the meantime, one of my good friends and really good colleagues in the Washington office of RAND, a fellow by the name of Dick Rettig who did a lot of medical technology assessment things and is one of the world's experts on ESRD [End Stage Renal Disease], left RAND to go to the Illinois Institute of Technology and ran a PhD program in a department there. Around about that time, completely independently, other legislation created, at the Institute of Medicine, something called the Council on Health Care Technology, which you will have undoubtedly heard about. And Dick was recruited from IIT to come back to Washington and to the Institute to be the staff director for that Council. So he also got in touch with me to say, "Look, if I take this job would you

consider coming over to the IOM and working on it with me on the Council?" And Karl was saying, "And, oh, by the way, in a year we're going to have this study on Medicare." And that was sort of irresistible. So I went.

Berkowitz: So Karl was your boss?

Lohr: Yes. I was in his division, but I actually spent about a year working more for the Council on Health Care Technology and in that Dick was my boss.

Berkowitz: This is a real change, going to IOM. In the RAND you're staff but you wrote everything yourself and there was no question about that. But in IOM there's a head of everything that's independent of the staff or that's different from the staff. Were you able to cope with that?

Lohr: I found the IOM a very congenial place to be. In the studies that I directed, for instance the Medicare study, it was the staff that wrote all of that report with the exception of two or three pages in one or two chapters that one of the members of the committee had done.

Berkowitz: Who was the head of that committee?

Lohr: Steve Schroeder, who I will say, parenthetically, was a fine chair of an IOM committee. He was very good to me and to the staff. He gave us a lot of opportunity to try to conceptualize how the study should go, what to do. It was

actually a three-year study and we had a substantial budget, so we were able to do a lot of interesting things. I mean, you do the usual sorts of things you do in an IOM study. You commission papers. But we did focus groups; we did a huge amount of site visits all around the country; we held hearings; we really did an immense amount of information gathering. We worked as closely as we could with people at HCFA to really understand the Peer Review Organization program and so forth. That was a wonderful study.

There are times when any staffers at the IOM will tell you that they chafe under poor chairs who don't manage the study and committee process as well as they might or who permit committee members perhaps to ride roughshod over staff who are increasingly, let's say since the '80s, very good professional people in their own right. And then [there is] the whole kind of external review process.

Berkowitz: That's a pain, I have to say. It means that they can't do anything in a way.

Lohr: Well, yes and no. You can't necessarily do things in as timely a way as certain sponsors might like, but you can try to manage things so as to make clear that you're going to have a review process that's reasonably expedited. If you plan it out so that you know that you absolutely will have your draft report in as good a shape as possible by such and such a date, you can

have reviewers lined up three months in advance and have asked them essentially to hold that time. It's only when things begin to slip that you can really run into problems. Or if, in fact, you've got a study in which the committee has gone beyond what the "data" will permit them to conclude. And that may be an issue in which the staff, even if they recognize that there are problems, may or may not be able to sort of tone a committee down. Then you'll run into problems with review. But I have to say, I was at the IOM from February of '87 until almost—nine years—and I thought it was, generally speaking, a wonderful place to be. Sam Thier was a remarkable person.

Berkowitz: He *is* a very remarkable person. I've talked to him before. He, of all the people I interviewed for IOM, it's like I felt that at the end of the interview I felt like I was ready to follow him anywhere. I was ready to go work for him, help him run for president, help him run for governor.

Lohr: Absolutely. He has that effect on people, and I have to say he was remarkably kind to me.

Berkowitz: He likes the staff, by the way. He makes that point independently, without prodding. He said people told him he wouldn't like it and he'd find the staff not very good when he got there. He was surprised and thinks they do a very good job. He's got that very positive quality.

Lohr: Yes, yes. I thought he was just wonderful. [Also] the person who was the Division Director for the Council on Health Care Technology was a woman by the name of Queta [Enriqueta] Bond. She became the executive officer for most of the time that I was there, then she left about two years before I did, to come down here to the Park [Research Triangle Park] to become the president of Burroughs Wellcome Fund. So I stay in touch with her. But there were just a number of good staff people there. Some of my colleagues who were division directors were first rate. Sure, it has its frustrations, but *any* place is going to have its frustrations. At some point you begin to learn how to work within the system and when you could perhaps circumvent certain things if you needed to.

Berkowitz: Right now I have a draft done of an IOM history and people are looking at it. I'll certainly send you a copy when it's done.

Lohr: I'd love to see it. I spent close to a decade there. I spent three years as a senior staff person, three years as the Deputy Division Director under Karl, then three years as the Division Director, so I had a career path through the IOM.

Berkowitz: Of all the studies you did with the IOM, aside from the Medicare study, what would you say was your best or your most influential?

Lohr: I don't think I can pick one, because I worked on a very wide array of topics.

Berkowitz: And as a division head you must have worked on a lot too.

Lohr: Yes. But of the ones that I was essentially the study director for, there are two sets that I'd pick out. One is the whole set of studies that we did at Bill Roper's request and instigation and support when he was the head of HCFA on what was then referred to as the Effectiveness Initiative. We did a series, Ken Shine was the chair for this series of meetings, in which we laid out the research agenda for effectiveness research. A lot of that got transferred over to NCHSR and then AHCPR in terms of supporting it, but we laid out what were appropriate clinical conditions that ought to be focused on first in effectiveness and outcomes research. Then on three particular topics we went into considerable detail about the nature of the research questions that should be directed at that clinical condition—breast cancer, for instance, being one of them and hip fracture and myocardial infarction—in order to lay the groundwork for the kinds of questions that you'd expect people in the health services world to focus on in terms of this broad rubric of effectiveness and outcomes research. And I think that [study] had a substantial impact. It led to a kind of research agenda

for the field.

The other set of things, and this is probably what I'm best known for apart from the quality study, is the two studies that we did with Marilyn Field, who was actually the Project Director, on guidelines. That's just been a remarkable exercise in its own right. When OBRA 89 was passed and created AHCPR, it also created what they called the Office of the Forum on Effectiveness and Quality of Health Care—some horrid title for it—the unit that was charged with supporting the development and dissemination of clinical practice guidelines, medical review criteria and a couple of other things. The then-Administrator of AHCPR, Jarrett Clinton came with a couple of his senior staff including the first director of that office, a physician by the name of Steve King, and said to us at the IOM, "We've never done this sort of thing before. There's no established definition of practice guidelines. What are these things? What should we be doing?" So we did a very quick study for them in 1990 to create a definition of clinical practice guidelines and to lay out a set of what we called attributes of good practice guidelines that had to do with reliability and validity and interpretability and clarity in documentation—there's a set of eight of them. We did that study in six months. It's possible to do these things.

Berkowitz: By the IOM standards that's lightening fast.

Lohr: Right. The agency immediately adopted the definition of practice guidelines and made clear that it expected its guidelines panels to understand this conceptual framework for what a guideline is. We made a big case, for instance, that guidelines panels should be multi-disciplinary. We made a big point about saying that there had to be a rigorous review of the scientific evidence and so forth. And AHCPR adopted that view from day one, and it made, I think, a huge difference in how they could make a case for the credibility of what they did. Interestingly, in Europe and the UK, there is this emerging interest in things like practice guidelines; the work that we did in 1992, which was supported not only by AHCPR but by a couple of foundations, Hartford Foundation and one or two other supporters [has been very instrumental there].

Berkowitz: What was the title of the book?

Lohr: That one's called *Guidelines for Clinical Practice: From Development to Use* and it was a very thorough examination of issues relating to the development, the dissemination, the implementation, and the evaluation of practice guidelines. In the course of that, though, we expanded on this issue of the characteristics of guidelines and developed what we called a "provisional instrument" for trying to evaluate or assess existing guidelines. At the time what you had was not very much

production of robust guidelines in the way that AHCPR was trying to do it in the early '90s, but you had one pile of "guidelines" of all sorts and of all varying levels of quality. We wanted to try to develop some mechanism by which people who couldn't wait for a guideline to be developed could try to figure out whether an existing one is one they should believe had any credibility and have any confidence in. So we developed this provisional instrument. Well, it didn't go very far in this country, but it took off like a shot in Europe. To our complete astonishment people in Spain and in England took it and, because it was a long and cumbersome instrument, they refined it and developed it. This was all going on and we'd hear about it. People in the state of Minnesota tried to use it. They had for a while legislation that mandated a very aggressive guidelines effort, so they tried to use it some. But I've always been bemused that certain things that we did got picked up and used a lot in Europe. And that book, that second guideline book, is just instantly known in much of Europe and Scandinavia and the UK. The IOM definition of guidelines is widely quoted. People may take issue with it or they may tweak it now and then, but it is extremely well known, not just in this country but outside this country as well. So I have to say I take a great deal of pleasure in having made what I think was a substantial

contribution to that field, and it clearly relates to quality of care.

I would certainly want to say that Marilyn Field, who was the study director for both of those studies, must share in whatever acknowledgments and approbation there is about that work. She is still at the IOM. Under me she was the deputy director of the division and remains, I think, the deputy. They've gone through a lot of reorganization in the IOM recently, and I've lost a little track of the organization structure.

Berkowitz: Ken is big on this management stuff, on this management review.

Lohr: Could be.

Berkowitz: Sam Thier was mostly involved in raising money. He didn't have much to do with internal management.

Lohr: Yes. That's right. The third study that I will say [I was influential], since you gave me the opportunity, was the last one I did. That was a very short study that dragged on longer than we'd anticipated. I think we'd expected six or seven months and it took nine. It was on physician work force in this country. It came out at just the [right] time—basically its conclusions were that we either have an oversupply of physicians in this country or we're rapidly getting there. We still have this huge influx—now they're referring to them as international

graduates—distorting to some extent the nature of the physician supply in this country. Not in terms of ethnic background. Essentially Medicare underwrites the cost of residency slots. Until now, and possibly even with changes that will be secondary to the Balanced Budget Act and various other things relating to Medicare and the support of graduate medical education, Medicare paid hospitals to open up residency slots. Because of the substantial subsidy that they were paid for having those residency slots, [hospitals] had a big incentive, among other things, to bring in substantial numbers of international medical graduates. So it's been a peculiar situation in this country for probably 15 years or so.

In any event, we made some fairly rigorous recommendations that came out just about the time that all these things were being debated. That report would have come out right at the end of '95, I guess, and, I think, had a substantial impact. It's a small report, but it just came out at just the right time. It was probably a little less hysterical about what really is this oversupply in this country and what should we be thinking about in terms of international medical graduates than a similar report that came out from the Pew Health Professions commission. That's a group that's been around for a long time. That was a study that we did in a relatively short period of time. The two people

who were the co-chairs of that—Don Detner who is now the Executive Vice President at UVA [University of Virginia] and Neil Vanselow who is now retired but had been the Chancellor at Tulane and did a sabbatical for a year at the IOM and then went back as a professor of medicine for a couple of years—were wonderful people to work with, very hard working and very sophisticated and terrific to have as chairs of what proved to be a fairly controversial study.

So those are the three sets of things that I am happy about at the IOM, or that I had the most to do with. There were plenty of other studies that I had something to do with or that were done in my division, but those are the ones that stand out apart from the Medicare study which started it all.

Berkowitz: Is your present job like being back at RAND or is it different here at the Research Triangle Institute?

Lohr: RTI is like RAND in the sense that it's non-profit, independent, private.

Berkowitz: A contractor.

Lohr: Yes. It has the same tax status as RAND. Its history is quite different. It was established by the three big universities in the area, namely the University of North Carolina at Chapel Hill, Duke, and North Carolina State University. So it has a very odd governance, in my view, an odd governance

relationship with the three universities. But it was the first organization here in the Park and it was established to provide certain of the research and scientific expertise and staff that none of the universities necessarily wanted to have on their own. And they *certainly* didn't want to have three competing sets of people doing certain of these kinds of things. I know less about the early years. RTI is nearly forty years old now, but I think it was more lab science and that set of things in the very early years. Then I certainly knew about RTI from the '70s when it did a considerable amount of work in things relating to evaluating the Medicaid and Medicare programs, certain kinds of demonstration things that HCFA tried out. Then, of course, RTI in the health world is probably best known for its surveys. It has a very illustrious history of *huge* national surveys and for pioneering a whole array of technological advances in survey work. It has some of the country's finest sampling statisticians and people who can design big national surveys and then a big unit that can manage to do them. And I'm talking about the kinds of surveys that do tens of thousands of people. They do little surveys, too, but they're really known for their big surveys.

This particular division, which is called the Health and Social Policy Division in a unit of Statistics, Health and Social Policy, does a wide array of things. I would guess probably 60%

or more of it is contract work and maybe even a higher percentage than that. Then there are people in certain fields, particularly people in mental health and substance abuse, who do a certain amount of their work on classic grants rather than contracts, but by and large I think RTI is considered a contract research organization, certainly with respect to the work that it does for the pharmaceutical industry. There are three people in my program who do most of their work for the pharmaceutical industry. Then there are people who do a whole array of still Medicare and Medicaid evaluations, particularly Medicare. People in my division, but mostly based in DC, are responsible for a lot of the work that's done for what's known as the Consumer Assessments of Health Plans Survey, or CAHPS, which is going to become the standard for what we used to call patient satisfaction but now is really consumer assessments and ratings of health plans. The instrument that they've developed is going to become the standard for Medicare, for the private sector, for Medicaid, and so forth. So we do quite an array of things in this program. It comes the closest to being something you'd recognize as health services and policy research, but I would not characterize it as being much like RAND. RAND is obviously twelve years plus in my past and I suspect, although I still have any number of really good friends who are there, that it's turning more towards

contract work simply because the federal government is turning much more towards contract work. I suspect that RAND still does a considerable amount of work for the big philanthropic foundations, and RTI does virtually no work for foundations.

One of the things to help close a circle is that we competed for, about a year ago, and won one of the twelve what are known as task order contracts from AHCPR to become an evidence-based practice center. So we will now have a five-year task order contract to do various tasks of developing evidence reports, which are essentially the front end of practice guidelines. It's the rigorous assessment of the scientific evidence on a particular clinical topic and developing what are known as evidence tables and otherwise writing up and having peer reviewed in a fairly rigorous way reports that make clear what the scientific evidence says on x or y topic. Our topic, for our first task, happened to have been pharmacotherapies of alcohol dependence. We were very pleased with that. We did that in conjunction with the University of North Carolina at Chapel Hill and specifically in conjunction with all five of the health professions schools over there, which is medicine, dentistry, nursing, pharmacy, and the School of Public Health, and the Sheps Center. It's a very close-knit team and we think we have a very solid group of people who could tackle practically anything you'd

care to name in the way of doing evidence reports and technology assessments and other kinds of work that relate to quality of care and practice guidelines.

Berkowitz: Thank you. I think that's a good note on which to end.