Interview with Sam Shapiro
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Conducted by Edward Berkowitz

Berkowitz: Let me ask you first a little bit about yourself. You were born in New York City. Where in New York?

Shapiro: That's right. In Manhattan. Moved to Brooklyn when I was very young.

Berkowitz: Middle class, lower class, upper class?

Shapiro: Middle class.

Berkowitz: Was your father a merchant?

Shapiro: No. He owned a paint factory, and my mother was in business herself. Yes, she was mostly in the real estate business. So, a typical middle class family.

Berkowitz: Where was the paint factory?

Shapiro: It was in the old East Side.

Berkowitz: That's interesting. You went to public school, I take it. Where did you go to high school?

Shapiro: I went to Boys' High, which at that time was one of the better known high schools in New York City. Now it's big time basketball, baseball, football. At that time it was mostly scholarship. So graduating from Boys' High at the age of 16, I went to Brooklyn College.

Berkowitz: Was Boys' High a public school or private school?

Shapiro: It was a public school.

Berkowitz: Did you have to have a special invitation to get in?

Shapiro: I really don't know. All I know is I had to take two trolleys to get there. It was a very high class high school. Then I went to Brooklyn College where I was graduated in June, 1933. From there I worked a year and then I went to Columbia to do graduate work in mathematics and statistics. Things were looking very dim at that time, so I quit after about a year full-time. I worked for awhile at a relief agency in New York.

Berkowitz: In 1933, was that part of the Federal Emergency Relief Administration?

Shapiro: No, it wasn't. It was Mayor LaGuardia's baby.

Berkowitz: Was this before FDR came into office?

Shapiro: No, it was FDR's period. But we're talking about an agency that was formed by Fiorello LaGuardia. From there, I went to Washington, DC, in early 1943. I worked for the Selective Service System heading up a unit concerned with personal data regarding people who were eligible for the draft. I went to the Navy and served about two years during the war. I was aboard a ship in the North Atlantic and the Pacific. Then when I came back and was discharged, I went back to Washington to work for what is now the National Center for Health Statistics. (It was then called the National Office of Vital Statistics.) That was

in 1946 after the war.

Berkowitz: What department was it in when it was the National Office for Vital Statistics? Was it an independent agency?

Shapiro: No, it had just transferred from the Census Bureau to the Public Health Service.

Berkowitz: So that would have been from the Department of Commerce to the Federal Security Agency.

Shapiro: That's right. I very fortunately came there at a time when they were doing something very special, and I became responsible for the births and infant death statistics.

Berkowitz: Before you did that work with Vital Statistics, had health been a special interest at all, or just applied statistics?

Shapiro: No, just statistics. That's right.

Berkowitz: When you were at Home Relief were you doing case work or were you doing statistics?

Shapiro: Case work.

Berkowitz: When did you start doing statistical work?

Shapiro: '43.

Berkowitz: And that had been your training, statistics, from Columbia, right?

Shapiro: I did have training, yes. I always felt, even when I was working for the Welfare Department, that my main goal was to

return to the field of statistics.

Berkowitz: Had you always been good in math? Were you good in math as a boy?

Shapiro: Yes. I was a member of Pi Mu Epsilon, which was an honorary mathematics society, while I was at Brooklyn College. Then when I left the Public Health Service, I worked for the National Opinion Research Center. That was in 1954.

Berkowitz: From 1947 to 1954 you were the Chief of the Natality Analysis Branch, NOVS [National Office of Vital Statistics, Public Health Service].

Shapiro: Then I was at the National Opinion Research Center.

Berkowitz: What kind of work were you doing for them?

Shapiro: I was developing research designs and questionnaires for national or local studies. Do you know anything about the NORC [National Opinion Research Center]?

Berkowitz: Not much. Tell me about it. Is that a private organization?

Shapiro: It's a private organization. It's affiliated with Chicago University and has been in business for quite a long time, and still is in business. I had functioned as a consultant through them in 1953 and then, when I was looking for work in that field, they hired me. I developed a questionnaire. At that time the questionnaires were quite unique, very detailed. It was

on health services. The interest at that time was in health services.

Berkowitz: Was this a questionnaire for patients or for hospitals? What kind of questions did you ask about health services?

Shapiro: This was an attitude survey of the general population about their past history of receiving care-where people received care and their attitude towards the care. Then I went to work for the Health Insurance Plan of Greater New York.

Berkowitz: I see. So you stayed there until 1955 and then you went on to HIP. That's another thing Mayor LaGuardia started, right?

Shapiro: Yes, I guess you would say that he was mainly responsible for HIP, he and Dr. George Baehr, who was one of the principal physicians at Mt. Sinai Hospital at that time. He was very interested in developing a pre-payment program which would be available to the employees of the city of New York principally. He was Mayor LaGuardia's personal physician and helped him form HIP.

Berkowitz: So this was after the Group Health of Washington. There were a couple of earlier ones, but it's a pretty early one. It's after Kaiser got started. It's like the Group Health of Washington. They started with a group of federal employees

originally and built up. This was similar. There must have been a tremendous number of New York City employees to draw from. It was a big base for HIP.

Shapiro: Oh, yes. Then HIP expanded and went beyond the city employees and started to become competitive in the general environment. I came to work there in June or July of '55 as the Associate Director of Research and Statistics. Paul Densen was then the Director of Research and Statistics. I collaborated with him on a lot of work. Paul Densen left in 1959 to become the Deputy Commissioner of Health in New York City and I succeeded him in 1959 and continued there until 1973.

Berkowitz: What was HIP's rationale for having a research and statistics operation? They're primarily a service organization, right?

Shapiro: That's a very good question. The original charter for HIP stated specifically that an attempt to investigate the effect of that type of organization should be initiated by HIP. You have to recognize that HIP was formed not by a bunch of businessmen but by Dr. Baehr who is one of the principal founders of HIP and Dr. Neva Deardorf who was from the field of social welfare. She was a very distinguished person. Her main interest was in determining the effect of this HIP. So from the very beginning, from the very earliest years of the program, they had

a research and statistics group at HIP of which Neva Deardorf was the initial director. She was one of the incorporators. Then she was succeeded by Paul Densen who prepared a volume on the history of HIP and gave a lot of details about the services received by HIP people. When I came there in 1955, that was still very early in the game, and the entire intention was to further the research program at HIP. If you'll look at the *cv* and look at the publications when I was at HIP, you'll see that this is not just talk, but it's really reflective of a deep conviction on the part of the program.

Berkowitz: I see that, for example, *American Journal of Public Health* in 1958, Shapiro, Weiner and Densen, "Comparison of Prematurity and Perinatal Mortality in the General Population and in the Population of a Pre-Paid Group Practice Medical Care Plan." That's interesting. You were trying to say what difference in quality, what difference in utilization does it make to have the pre-paid plan.

Shapiro: That's true. We were looking at the quality from the same point—the true measure of quality, the end result of quality—what effect does being a member of the program have on the outcome of pregnancy, in that case. We did find that there was a very important impact that the program had on infant mortality and prematurity.

Berkowitz: That played upon all of your expertise, because you already had worked in the general population in a sense. What did you find?

Shapiro: We found that it was better.

Berkowitz: There might be a little Hawthorne effect there, of course. These are people that are not in your study. Maybe these people thought they were pioneers.

Shapiro: No, they didn't think so. At that time—remember that this was about 10 or 12 years after the development of the program—people joined the plan not because it was a pioneering program but because it was a way of obtaining medical care without co-insurance, without pre-payment. We were able to identify pregnancy outcomes among pregnancies where the women had gone outside the system even though they were members of the program to obtain prenatal care. It was generally accepted by the field at large as a general observation, not simply an artifact of highly specialized subgroups within the population. It was accepted in that way and became very well known in the field. There were two papers that I produced at that time which made a very heavy mark on the field.

Berkowitz: Which were those? Is this one of them, the one we were just talking about?

Shapiro: Yes.

Berkowitz: The one on hospitalization?

Shapiro: No.

Berkowitz: I assume it was lower, the hospital utilization?

Shapiro: Right. That was Paul Densen's baby, hospital utilization. Number 17, "Further Observations."

Berkowitz: "Further Observations on Prematurity and Perinatal Mortality." What was the finding of that? The same? Reinforced the other one?

Shapiro: The first study was a one-year study; this was a three-year study with the same observation.

Berkowitz: So you had more longitudinal data? Who were these guys? Were they transit workers and their families or mostly white collar office workers or sanitation workers?

Shapiro: You've named them: sanitation workers, teachers, transit workers—the whole range of city employees and their families and also non-city workers. The garment workers union.

Berkowitz: In the late '50s there was a lot of union interest in this sort of thing. The garment workers in particular.

Shapiro: Right. That's right.

Berkowitz: Were the unions very powerful in HIP? Did they have some role to play?

Shapiro: Yes, they were *very* powerful. The Board of Directors was a very potent organization. It wasn't a paper organization.

It was a very powerful group of men with representation from private industry—big industrialists were on it—as well as leaders in the Health and Welfare Council of New York.

Berkowitz: Like Leona Baumgartner? What kind of person would that be?

Shapiro: She wasn't on it.

Berkowitz: She's one that I know of, though, a player in that sense.

Shapiro: Yes. I knew her very well too. She was part of the city administration. She was supposed to become a commissioner, but they decided that they wanted to have an MD.

Berkowitz: Now, you're publishing all these papers. You started to do HIP work. You stayed at HIP for a long time in one capacity or another. Until 1973? Did you think of yourself as in the field of public health? Would that have been your field? Or public health statistics? How would you have identified yourself?

Shapiro: I then thought of myself as a worker in the field of health data. The responsibility for developing the health statistics for the planning was mine. I had a very large unit of people through which flowed what we called the Med 10. The Med 10 reported on an individual basis the service received by each individual in the plan every day of the week, by name, by number,

by what we call birth data—sex, month, year, and so on—and also the diagnosis. The Med 10s would go through this unit. There would be a summary page of the data that became the source of information for developing research projects. The Med 10 became a key factor not only in developing research projects but in developing ideas about research. Our main goal involved developing the data for the system through the statistics unit. My main interest was in research. They had a research department that functioned very well. We had a research committee consisting of members of the medical groups which reviewed any proposal that was being considered for research in the plan. I must say that in every case where I made a presentation, it was adopted. That's how we got into the study of coronary heart disease and breast cancer.

Berkowitz: What were some of the variables in those? Were you looking at the same kind of questions, the differences between pre-paid and general population?

Shapiro: No. These were epidemiologic studies. The study on coronary heart disease developed as a study which had a defined population base, the HIP population. We determined through special examinations of people—we had a periodic examination, every two years, of a representative sample of the population—the instances where people had angina. We had the reports on the Med

10s plus the reports on the special examinations of people who had coronary heart disease, myocardial infarction. It became a very famous study. It was strictly restricted to the HIP population. It was not an attempt to cross reference the HIP population to the general public.

Berkowitz: I see. What did you find in all this when you looked at these people over time? What were some of the findings?

Shapiro: Here are some of the publications.

Berkowitz: I see. You got data about the incidence of coronary heart disease and you found that the older you are the more likely you are to have coronary heart disease.

Shapiro: That sort of thing, but it was also medical. People who had different types of conditions were more likely to develop coronary heart disease.

Berkowitz: What they call "co-morbidity," if you have one thing it leads to another.

Shapiro: That's right. Here's one: "The Social Factors in the Prognosis of Men Following the First Myocardial Infarction."

Berkowitz: Ah, that's interesting. In other words, what separates two people that have the same condition. The Framingham Heart Study was a bit like that.

Shapiro: Exactly. In fact, we had a lot of discussions with Framingham. They started a few years before we did.

Berkowitz: They have *real* longitudinal data. I don't know if it's still going, but what's interesting to me about that is that they find similar people and then one will quit his job. That people react differently to the same impairment is an interesting thing about disability. This is a little bit like that too.

Shapiro: Yes. And the prognostic implications of serum cholesterol.

Berkowitz: But, of course, you had a group of people more or less homogeneous, didn't you, in income level, as opposed to the people in Framingham?

Shapiro: No, there was quite a spread. We didn't have very poor people nor very rich people, but, excluding those two segments, we had a broad spectrum. The very poor who were not working were excluded from the study and the very wealthy people who had their own private insurance, or who didn't have any insurance at all, who were not working for the city or one of the trade unions. That was in HIP.

Berkowitz: After 1965 did HIP have Medicaid patients or not?

Shapiro: Oh, yes, sure.

Berkowitz: So then they began to get really poor people at that point. Is that one of your papers about Medicaid people? Did your office also have actuaries?

Shapiro: Actuaries? No.

Berkowitz: So you weren't setting premiums or underwriting?

Shapiro: Not underwriting in the classical sense.

Berkowitz: That's also what they use data for, right?

Shapiro: As a vice president and responsible for research and statistics, I had many questions thrown at me concerning the adequacy of the premium level to maintain the program. I developed many internal papers on that subject.

Berkowitz: I imagine the premium level was a highly politically negotiated thing. Did the city pay all the premium for a typical worker?

Shapiro: Yes, for their employees.

Berkowitz: If you were a teacher the city of New York paid the whole thing except for any co-pays?

Shapiro: I don't remember how it worked. For example, the Transit Authority. That I *do* remember.

Berkowitz: Mike Quill?

Shapiro: That's right, Mike Quill. They ran their own show. They received payments from the city towards a health benefit. All the negotiations were directly with the union for membership in the program. It was kind of a mixed situation. Some of the unions had considerable power over the health fund, and in other cases the city managed the health fund. So, in some instances we negotiated with the city, and in some instances we negotiated

with the union.

Berkowitz: You know, it's very similar to the Group Health in Washington where they started with just white collar federal employees and then they got the transit workers. Once they came in—and they were a cooperative, which HIP wasn't, right?

Shapiro: It was not a cooperative.

Berkowitz: So they had real emphasis on voting, and then the unions came in and of course it changed the dynamic completely because they had umpteen thousand votes to whatever. But HIP had some of the politics. Rate setting was not exactly actuarially neutral, but rather sort of negotiated.

Shapiro: As a matter of fact, I left there in 1973 because of a split up in '72 between the management of the company—I was part of the management—and the unions in HIP. It was a period of turmoil in '72 and I decided to leave.

Berkowitz: Did HIP use its own hospitals? How did that work?

Shapiro: It was a mixture. HIP had one hospital in Queens, LaGuardia Hospital, and that served the members of several of the plans.

Berkowitz: By "several of the plans" do you mean several of the clinics or locations?

Shapiro: At that time there were 32 medical centers. LaGuardia Hospital served Jamaica Medical Group members. All the other

hospitalizations were taken care of by physicians who had admitting privileges in whatever hospitals the patients group was functioning in. Some, where the membership represented a sizable portion of the hospital patients, were a very potent group, and others were very secondary.

Berkowitz: So HIP was not a staff model HMO? It had these doctors that worked as private doctors and took HIP patients on a capitated basis and admitted them to whatever hospital they worked in. Is that right?

Shapiro: Mind you, I'm talking about a period 25 years ago.

Berkowitz: Right. Before these words became common.

Shapiro: Before staff model HMOs came into existence. At that time there was a mixture. Many of the physicians saw patients out of their own offices. Other physicians had offices within the medical group center and saw patients there. The specialists mostly saw patients in the medical group center. Most of the physicians at that time were part-time physicians. They weren't full-time for HIP. There were several medical groups where the physicians were all full-time for HIP, and one of the goals of HIP was to develop a program where most of the care was rendered by full-time HIP physicians. That was a major objective of HIP. Like Kaiser and like Group Health Association in Washington.

Berkowitz: The advantage being that if they're full-time with

HIP, they wouldn't short change the HIP patients?

Shapiro: We never talked in those terms, of short changing them, but we felt that there would be a greater loyalty to HIP. There would be a greater degree of involvement of the physicians. We never felt that they were short changing the patients. There was a study done in which every physician was appraised on the basis of a sample of his patients. Some physicians were let go. It was a very potent instrument for developing a loyalty within HIP, even among physicians who weren't full-time at HIP. How the program has developed since '73, I don't know.

Berkowitz: During this period, this long period when you're at HIP from 1955 to 1973 which is *really* a lot of time, what kind of professional meetings would you go to? Would you go the public health meetings every year? They were big meetings. What kind of other groups were you involved in or attending in your professional capacity?

Shapiro: Well, practically every group that I've listed here that I'm a member of. The American Statistical Association, the American Public Health Association.

Berkowitz: Did the American Statistical Association have a health sub group, the statisticians? Or was that just methodology?

Shapiro: Methodology.

Berkowitz: And Public Health which is a big thing, I know. And

later I see you were a member of the IOM. When did you become a member of the IOM? '70 something? '80 something?

Shapiro: '74 or '75.

Berkowitz: You were an early member. Do you know who it was that suggested that you be a member of IOM?

Shapiro: Yes. Let me think.

Berkowitz: Did you ever feel discriminated against in these groups that you didn't have a PhD?

Shapiro: No, I never felt that way. I guess, immodestly, I had such a reputation, through the production of what the field considered important research, that it never entered my mind. I went to Hopkins in '73.

Berkowitz: That's a place that takes credentials very seriously.

Shapiro: Yes. It thinks very highly of itself.

Berkowitz: That was a real decision, right, to go from HIP which is a non-profit, service-oriented organization to an academic setting.

Shapiro: It wasn't as strange as it seems because for a number of years I had been lecturing at HIP and at other universities. I was invited periodically. I made a decision to come to Hopkins. I had another offer from the University of Michigan.

Berkowitz: Also a very good public health school. Was it Nathan Sinai who was there? I've never quite known who he is, but I see

his name all the time.

Shapiro: Right. He was a dean.

Berkowitz: He was in public health.

Shapiro: Right. And the University of Rochester. I had a number of offers. My plan was to remain in New York City to activate my appointment at Sinai Hospital. It didn't work out that way.

Berkowitz: Where did you live when you were working with HIP? In the city?

Shapiro: No, I lived in Teaneck, New Jersey.

Berkowitz: Bergen County. Where was your office?

Shapiro: Manhattan.

Berkowitz: Then you decided you'd obviously have to move to Baltimore when you came here in 1973. Do you live in the city of Baltimore?

Shapiro: Right in the city. One block north of Lake Avenue off Charles Street.

Berkowitz: When you were at HIP doing your studies did you get federal grants to do them?

Shapiro: Yes. Lots of them.

Berkowitz: What kind of agencies were you dealing with in the federal government when you were at HIP? Would it be NIH?

Shapiro: Mostly NIH.

Berkowitz: And depending on the study, if it was a heart study,

the National Heart Institute?

Shapiro: The National Heart Lung Institute. Then the mammography study was the National Cancer Institute.

Berkowitz: They had a lot of epidemiologists, didn't they? NCI, I got the impression, they seemed the most interested in that.

Shapiro: They've always been very interested and very powerful in the field of epidemiology. I had very good friends there. The mammography study was with the National Cancer Institute. Even when I came here, I retained responsibility for that study.

Berkowitz: What about funding this other bureaucracy that I'm trying to figure out, like the National Center for Health Research and Development? Where does that fit into the kinds of studies you were making? Did you have dealings with them?

Shapiro: The Health Services Research and Development Center , which I became head of when I came Baltimore, had been funded by HSR&D [Health Services Research and Development].

Berkowitz: And that was where in the bureaucracy? Part of the Public Health Service? It was a different thing than NIH?

Shapiro: Oh, yes. That was a very broad program that was founded by Paul Sanzaro and I was on the advisory group before I came here. It was a very high point of funding and then went downhill, and now it's gone again. The Research and Development Center at Hopkins was one of a series of centers that the group

in Washington funded.

Berkowitz: What was the rationale for that when there were already epidemiologists at the National Cancer Institute, there was already this big NIH structure. What's the difference?

Shapiro: At that time the research that was being carried out by NIH was primarily disease-oriented rather than service-oriented. Their approach would be epidemiologic whereas the Health Services research approached the problem from a service standpoint. Then there was me. Now there is a blurring of that differential, particularly in the Cancer Institute. There are many studies being funded by the National Cancer Institute which you might say, don't they really belong in Health Services Research and Development as compared with the orientation taken by the National Cancer Institute. At NCI the orientation is towards cancer. Their argument will be that that is the main rationale, whereas the Health Services Research Center would become interested in cancer or in heart disease only incidentally as they probe into the service aspect of care.

Berkowitz: And this Health Services is not the same as Public Health? Was the agenda to give away money to public health schools when they created this Health Services Research stream, or it to give it to economists? It's hard for me to see. There must have been some reason that there was this agitation, that

the people must have felt that they were not being given sufficient money. Were they public health types like the ones here? There are a lot of economists here, right?

Shapiro: Primarily it was public health. Economics was a secondary stream. We've had economists, and very well known economists, in the Center. In fact, on the departmental level, not in the Center, but on the departmental level—the Department of Health Policy and Management—where the Center is located.

Berkowitz: Was this the same department that Karen Davis was in?

Shapiro: That's right.

Berkowitz: So this Department of Health Policy and Management had David Salkever and the economists and other distinguished ones, Herbert Klarman. You have economists. Did you also have epidemiologists?

Shapiro: It's a mixed bag. We have economists, we have health services researchers who plan across a number of fields but approach the field from the standpoint of the problem as being presented. I don't consider myself a sociologist or an economist, but given my background and the breadth of my interests, I call myself a health services researcher.

Berkowitz: When did you first call yourself a health services researcher? That's a recent, '80s kind of thing. I see there's also an Association for Health Services Research that you've been

active in, right? So that would be the umbrella organization for centers like yours, also having the same range and the same mix?

Shapiro: Right.

Berkowitz: Do you know when the Association for Health Services Research started? That's a fairly newish thing, right? You must have been there at the very beginning of that.

Shapiro: Oh, sure. The '70s.

Berkowitz: In the '70s? And the rationale for that being the same thing we've been talking about, that there's this hospital that's got all these medical specialties, but there are people who have this different outlook about health services research—quality or, I don't know what the other buzz words would be.

Shapiro: Utilization. Those terms cover a very broad spectrum of conditions concerned with the organization and development of individuals in the population.

Berkowitz: I was just thinking of my own experience. Susan Horn, for example, she knew a lot about statistics but she didn't know much else. She was methodologically absorbed. I never thought her sense of the real institutional setting of the hospital was the greatest. I guess that's an example of a sub sub-specialty in some ways, somebody whose contribution really was statistics.

Shapiro: When was the last time you saw her?

Berkowitz: 1985 or so. She was very interested in the case mix of DRGs so that they could somehow take into account severity. But her whole world was just dominated by reducing statistical variance as opposed to saying that's a cancer patient. I never got the feeling she put it together with people very well. It was just a data base to her that she was massaging. I don't mean to go off on her. One day I said to myself, "We're here for a year. Let's go see the hospital." And she said, "That's a good idea." The next day we went to the billing office. That's where the hospital was for her, I guess. I was expecting to see something else.

Shapiro: That's very good!

Berkowitz: That's an absolutely true story. So, in addition to Hopkins, what are some of the other places that are big health services research centers or places where they do a lot of this? Would the other places be public health schools like North Carolina and Ann Arbor?

Shapiro: University of North Carolina, UCLA, Harvard. They have both economists and people like myself and also classical types of epidemiologists, a superb epidemiology department. Spread out over the entire range of universities, there must be now maybe 10, 12 health service research centers, but they're different types than existed previously. When I came here the bulk of the

money came from the National Center for Health Services Research as a grant.

Berkowitz: An open-ended grant. I see.

Shapiro: That's right. Since the second round none of the money has come to the Center through a block grant.

Berkowitz: So it has to be projects.

Shapiro: That's right.

Berkowitz: And when that starts you've got to look more broadly around.

Shapiro: That's right. NIMH is a very important supporter of programs undertaken by the Center.

Berkowitz: You've published on mental health.

Shapiro: Yes.

Berkowitz: I don't know what most of those studies are because I know it's a very contested thing now within health insurance plans.

Shapiro: It's always been.

Berkowitz: It's very hard to control, yes? Hard to control the number of visits that somebody gets.

Shapiro: I have a feeling, and it's not just a feeling but based on the data, that it's overblown. In one study it turned out that it didn't cost very much if we try to spread the premium for that service across the total population. I've always felt that

that's true. You didn't know exactly what proportion of the total utilization was accounted for by mental health services, but it couldn't have been that much. It certainly was far less than most people had projected.

Berkowitz: I would say, in my non-scientific, non-statistical way, that a Jackie Gleason would go home and yell at his wife, that he wouldn't go to the psychiatrist. But teachers who are reading books about Freud and such and fancy themselves intellectuals probably would be heavy utilizers. The Jewish people who were the teachers might have used it more than the Italians who were the transit workers or the Irish. Interesting. Do you do ethnic variables in these things, Jewish versus Italian and Irish?

Shapiro: We didn't use religion.

Berkowitz: That would be interesting to see, especially because there must have been a very heavy percentage of Jewish.

Shapiro: Among the teachers.

Berkowitz: And just in HIP in general, I'd imagine. More than you would expect even in the New York general population. No?

Shapiro: I don't think so.

Berkowitz: Getting back to Hopkins for a minute. You said that mental health was one of the things after you started to go for projects. What was your own work about at Hopkins? You

mentioned that you took with you the breast cancer study.

Shapiro: At Hopkins most of the work that I've done has been community based studies, general population studies. They were influenced by personal factors, environmental factors.

Berkowitz: In other words, why does someone go to a doctor or a hospital?

Shapiro: Yes.

Berkowitz: For example this "Ambulatory Care for Chronic Conditions in an Inner City Elderly Population," number 104.

Shapiro: Yes, that came from a survey.

Berkowitz: That seems like a break. The one before that is about pre-paid group practice, so that's still data from HIP. That's 103. I see 102 is a Hopkins thing also, isn't it? "A Study of the Role of New Health Practitioners in Pre-Paid Group Practice."

Shapiro: Yes, 102 is a Hopkins study. That was a very interesting observation. That was a period when Hopkins was attempting to bring into group practice health associates as new health practitioners, people who were especially trained to help the primary care physician and to provide services that didn't necessarily require a doctor.

Berkowitz: Big emphasis at the time, at a time when people were concerned about cost care inflation and also physician shortage.

Shapiro: Exactly.

Berkowitz: Turns out they didn't have to worry as much as they thought.

Shapiro: Well, we were worried about it. We carried out studies at the Columbia Medical Plan.

Berkowitz: Which Hopkins had its eye on, if I recall. They wanted to take that over.

Shapiro: The main interest we had out at Columbia as a research group, was in determining the effectiveness of these health practitioners. That was a big deal at the time. We did a number of studies and, after a period of time, they receded in importance. The whole issue receded in importance. When I came to Hopkins, the primary focus of the Center was on the research that we were carrying out at Columbia.

Berkowitz: I see. That was another reason for hiring you, then, in a sense.

Shapiro: Well, maybe so, maybe so. But very quickly that was broadened, and after just a few years, I dissolved the unit out at Columbia, Maryland, and moved the people back here. We spread. We became interested in the practices in the general population, not just under an HMO. We did a number of studies in the community around the hospital.

Berkowitz: That's a great public health tradition, isn't it. That goes back to Edgar Sydenstricker. East Baltimore is much

studied.

Shapiro: Right. And then we broadened our range of interest and began to do studies wherever we saw the opportunity to do a study, whether it was a national study, or a regional study—and by regional I mean a number of states combined, or whether it was here in Baltimore. It didn't matter. So that the Center's reputation became much broader than it had been previously. It was no longer a specific center interested in a specific set of conditions in a specific area. From that point on—that was about the end of 1970s and on—we did quite many research projects and became well known. One of the major studies, a very important study, that we carried out was funded by the Robert Wood Johnson

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Foundation. In that study we were attempting to determine the effectiveness of coordination of health services for primary care. It was a national study and involved us with many areas of the country, very heavily funded, about half a million dollars.

Berkowitz: That's a big study. When was this now?

Shapiro: 1975 or '76.

Berkowitz: So it's a fairly early Robert Wood Johnson project. That was a David Rogers project, was it? Who had no small interest in Hopkins himself, even as head the Robert Wood Johnson. That was a big study. Another question that's always interested me is that you have a field here that is very

quantitatively oriented. How did you adapt to the onset of computers?

Shapiro: Well, in the '70s, when I came here to Hopkins I would use the IBM equipment. In the 1980s we began to move over towards PCs. I work with a computer, totally computerized. I never felt that there was a tremendous up swell in activity once the computer came into existence. We just continued as we had in the past. I'm not saying that it didn't happen. All I'm saying is that I didn't feel it. It was just another tool. I think that the computer has made a difference, however, in the exchange of information. That's how I use the computer. I don't do problems on the computer. I've gone beyond that point and I just don't fuss with it, but the way I see the computer interaction with people it's more in the nature of being able to do more of what we had to do previously, rather than something new. I don't feel that there's anything new that the computer has made available to us as compared with the old IBM system.

Berkowitz: You were doing all your correlations and regressions with the old system. I see. Going back to that Robert Wood Johnson study, did that lead to a lot of publications, the study about prenatal care?

Shapiro: Oh, yes.

Berkowitz: That was a big campaign at one point, the notion that

the basic idea was that prenatal care was good. You should get prenatal care. It would eliminate premature birth and therefore would save money. You did some work of that type.

Shapiro: A success story: Marie McCormick, who's chair of the department of pediatrics up at Harvard, was a young person on that program. The study that's recorded here bares her name first. Wherever you see her name that reflects a series of reports that came out of that Robert Johnson study.

Berkowitz: Yes, I see. 138 is *American Journal of Diseases of Children* and it's about injury and its correlates among—what's NBW?

Shapiro: Normal birth weight.

Berkowitz: Normal birth weight and low birth weight. That was a major activity of this Center.

Shapiro: Right.

Berkowitz: Does the Center continue today?

Shapiro: Yes.

Berkowitz: You left as head in 1982.

Shapiro: This is right. Nine years plus. I decided to step down. I thought that the Center would be in a position to hire a person with a background such as Don Stinewachs.

Berkowitz: What was his plus? Was MD a plus?

Shapiro: He's a PhD. It was a voluntary move on my part. He's

now chair of the department.

In 1984 I became emeritus. In '82-'83 I gave up the position of Director of the Center. That was a long time ago.

Berkowitz: Let me ask you just one last question that my sponsors want me to ask you. They are interested in this whole business of the federal government's involvement in health services research. How would you critique it? Was this National Center for Health Services Research and Development—which has been replaced by an Agency for Health Services Research—have they been doing the right thing as far as you're concerned, giving money for the right kinds of things?

Shapiro: Yes. I think that they have been pretty important and been doing very good work in helping promote the whole field of health services research. The quality level has been going up. The Center itself has been obtaining funds not only from that agency but from NIH, particularly the mental health institute. I think that it's about equally divided. The research received and supported by the agency and the research supported by NIH. It's very important. I feel that with the existence of that agency the whole field has turned around. There was a period when health service research was on the down slope.

Berkowitz: When would that have been, in the '60s?

Shapiro: In the '80s.

Berkowitz: And I can guess why. In that year the Reagan administration would have thought that, "The real agenda here is that they want to pass national health insurance and we're not going to fund that kind of research. They're going to expose inadequacies." Is that reasonable?

Shapiro: Whatever the reason why—I just don't know.

Berkowitz: Also data was not big. Ideology and data are not really compatible.

Shapiro: Part of the problem was with the National Center didn't know which way the field should go.

Berkowitz: They're very interested now in these questions about utilization and quality and whatever else they do.

Shapiro: Yes.

Berkowitz: So you see there is a future for this field?

Shapiro: I do, yes. I think it's a permanent field.

Berkowitz: For a young person today, what sort of training would you advise if you wanted to do health services research? Public health, MPH?

Shapiro: To be a health service researcher it's absolutely essential that you have your doctorate. I think it's very important that you have your doctorate in a specialized field comparable to one of those two, yet have an interest in the problems that exist in the field.

Berkowitz: In other words have the quantitative methodology but also have a view of things so that you're interested in these questions.

Shapiro: That's right.

Berkowitz: That's a good note on which to end. Thank you.