

Health Economics and Health Economics Research

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THIS PRESENTATION IS DRAWN from my own experience and best recollection of readings and conversations. I have not done any new research. The presentation is divided into four parts, as follows:

1. Pre-1960.
2. Post-1960.
3. A reformulation by subject area.
4. A view from Washington, 1976–1977.

Pre-1960

Economists were working on health care long before there was a subdiscipline called health economics.

In the 1930s the American Medical Association (AMA) maintained a permanent Bureau of Medical Economics or Medical Economics Research. The Committee on the Costs of Medical Care (CCMC) conducted numerous surveys, studies, and analyses, off which the research community lived for a long time. Milton Friedman and Simon Kuznets at the National Bureau of Economic Research (NBER) were studying professional incomes—with much emphasis on comparisons between physicians and dentists. This proved to be highly influential in thinking by economists about medicine, and was reinforced by Friedman's own later writings and by Reuben Kessel's 1958 article on medical price discrimination as evidence of monopolistic behavior.

In the 1940s, after World War II, Seymour Harris at Harvard was studying public expenditures for health care. He saw the importance of direct payments to providers at a time when cash benefits to recipients of public assistance were still dominant.

Eli Ginzberg at Columbia was studying the economics, especially finances, of hospital care for the New York State Hill-Burton agency. He did this shortly after completing a report on nursing, which recommended a substantial shift of staffing from registered nurses to licensed practical nurses.

By then the CCMC staff had dispersed, and most moved to the Social Security Administration (SSA), where they estimated the aggregate statistics on health care expenditures, voluntary health insurance, actuarial projections of the cost of national health insurance, and conducted surveys of independent prepayment plans. The names are familiar: I. S. Falk, Louis Reed, Margaret Klem, and Agnes Brewster.

Selma Mushkin had moved to the Public Health Service (PHS) from SSA. Indeed, there was considerable staff exchange between PHS and SSA, with the Hill-Burton division of the PHS serving as a site for intramural research. This was Dorothy Rice's first job, working with Louis Reed.

In 1945 the Friedman-Kuznets book was published. It attracted much attention in the economics profession, both for its findings and for its technical sophistication in applying advanced statistical techniques to the available, scanty data.

The early 1950s saw several developments, and then activity quieted down for a while. The Brookings Institution embarked on a major, all-encompassing project in health economics. Everybody waited for the publication, and was disappointed.

In 1950 the American Economic Association (AEA), under Milton Friedman's promotion (Friedman was in charge of the program in behalf of Frank Knight, then president-elect), held its first session on medical economics. Jerome Rothenberg's paper applied the new welfare economics. A. C. Kulp of the Wharton School pointed out that health insurance is not neutral.

In 1951 the *Quarterly Journal of Economics* published what was essentially a debate on national health insurance by the Campbells and I. S. Falk. Dick Netzer also intervened.

The *Journal of Business* and the *Harvard Business Review* each published an article of mine on the economics of hospital care. The

latter, addressed to a lay audience, attracted more attention.

The National Manpower Council, staffed by Eli Ginzberg, prepared a report on the professions. I drafted the chapter on physicians. The council also held a conference on allied health manpower.

In 1951 the Health Information Foundation (HIF) gave a sizable grant to Oscar Serbein of the Columbia Graduate School of Business to study health care expenditures and health insurance. Although the report was pedestrian, able staff developed.

When HIF, with pharmaceutical funds, first changed leadership, George Bugbee, the new president, hired Odin Anderson as research director. In 1953 they conducted the first nationwide survey ever of health insurance enrollment and benefits. They also continued to provide small research grants to behavioral scientists, but not to professional economists. HIF employed economists, but these never occupied leadership positions at HIF or its successor, the Center for Health Administration Studies, University of Chicago.

In government, the National Security Resources Board hired its first medical economist in 1951. The agency was dying, and outside economists were not receptive to its offers of research grants.

The Magnuson Commission (The President's Commission on the Health Needs of the Nation) performed its work in 1952. Volume 4 on economics and finances, which were generally viewed as identical, contains essays by Seymour Harris, Falk, and Harold Groves of Wisconsin, and data compilations by William Weinstein of the U. S. Department of Commerce, the site of periodic surveys of earnings in the independent professions. The Commerce Department had received completed questionnaires from approximately 50,000 M.D.s in 1949, which permitted for one time only the publication of physician earnings data for large cities. Initial attempts were also made in the statistical section of volume 4 to cross-classify health care expenditures by object (hospital care, physician services, etc.) and by source of payment (tax funds, insurance, self-pay, etc.).

SSA continued its data work in the early 1950s, but was circumspect on policy pronouncements.

As noted earlier, the later 1950s were rather quiescent.

Another AEA session in medical economics was held in 1955, sponsored by Edwin Witte of Wisconsin, then president-elect, who had been staff director for the Committee on Economic Security in 1934.

In 1954, the Hospital Council of Greater New York hired the first Harvard Ph.D. in economics, who had written a dissertation on the economics of cancer under Seymour Harris's supervision.

Post-1960

The interval 1961–1962 was a watershed period, when the newly renamed subdiscipline of health economics emerged as a visible entity. There was a conjuncture of events: Victor Fuchs, then at the Ford Foundation, proved to be highly instrumental. He was interested in HEW (Health, Education, and Welfare), and sponsored six papers in three fields, back to back between theory and empirical application. The health field got Kenneth Arrow's paper in the *American Economic Review* and my own book, *The Economics of Health*, for \$1,500 each.

The first national conference on medical or health economics was organized and led by Selma Mushkin. Rashi Fein and Burton Weisbrod had just written their books on cost-benefit analysis. New people appeared at the Ann Arbor conference—Gerald Rosenthal, Anne Scitovsky, Nora Piore.

For the year 1962, SSA revised its data on health care expenditures, initiating a new systematic framework that cross-classified objects of expenditure by source of payment.

In 1962 the first economist was appointed to the Health Services Research Study Section of the National Institutes of Health. Before 1962 research grants had been awarded to Mary Lee Ingbar at Harvard and to Donald Yett, first at Ohio State and later at Washington University, St. Louis. The study section was active in health economics beyond the review of applications and the award of grants. It held an informal conference, with Richard Musgrave as chairman, and commissioned four papers by economists in its two sets of Health Services Research Papers published as supplements to the *Milbank Memorial Fund Quarterly* in 1966. The four papers were by Kenneth Boulding of Michigan; Victor Fuchs, a last-minute substitute who published his first paper in health; Paul Feldstein of Michigan; and Dale Hiestand of Columbia, who had been on Serbein's staff. Fuchs's paper pointed to his subsequent research on the influence of health care on health status, and he assembled a group of workers at NBER. Included among them were Richard

Auster and Morris Silver of City College. Irving Leveson and Michael Grossman, under Jacob Mincer and Gary Becker, completed their dissertations in health economics at Columbia and worked at the NBER.

What was most astonishing in the mid-1960s was the steady flow of dissertations from Harvard on the economics of health. Under John Dunlop and then Martin Feldstein, Gerald Rosenthal, Ralph Berry, Frank Sloan, Joseph Newhouse, Robert Evans, Paul Ginsburg, David Salkever, Louise Russell, and Jan Acton received their doctorates in economics.

The Brookings Institution sponsored occasional papers on health economics. My paper on syphilis and Thomas Schelling's on the value of human life had to do with the valuation of benefits from public expenditures.

In the year 1966–1967 the Gottschalk Commission performed a cost-effectiveness analysis of hemodialysis vs. kidney transplantation for the federal Office of Management and Budget.

Throughout the 1960s, SSA remained a leader. Dorothy Rice and her young staff made continuing refinements and improvements in the annual articles on health care expenditures and voluntary health insurance. Rice's work on the cost of illness became widely used. After Medicare was enacted, SSA paid the American Hospital Association for special surveys of audited reports of hospital finances; sponsored a temporary expansion by the Bureau of Labor Statistics of the medical care component of the Consumer Price Index (CPI); analyzed Medicare data, drawn from a dual data system that was redundant by design; and held academic seminars for its own professional staff, with papers delivered by outside professors and by grantees reporting on completed research.

Several new journals were founded—*Medical Care*, *Inquiry*, and *Health Services Research*. Established medical and public health journals became hospitable to articles by economists.

Toward the end of the 1960s it was time for a second nationwide conference on health economics. The Ford Foundation paid for it and The Johns Hopkins University sponsored it. The conference dealt only with empirical research and deliberately excluded policy concerns on a grand scale. A new group of young authors was sought out to deliver papers; old-timers served as discussants. Also published in the proceedings were three summaries of dissertations from Harvard, Yale, and Princeton. If one reflects on the policy

issues that were under active consideration at the time, all were either covered or finally excluded only for lack of pertinent data.

There was perhaps one exception: financing. There was real concern by the committee who organized the conference that the financing issue was still ideological. However, Arrow's 1963 article did make it acceptable to write on health insurance in the professional journals. Martin Feldstein subsequently showed how the powerful tools of econometrics could be applied with ingenuity, skill, and verve to available scattered data.

A number of economists undertook research in health care financing after the Baltimore conference, focusing on the source of increase in health care expenditures. Included was some joint work by The Johns Hopkins University and SSA, which was financed by the National Center for Health Services Research (NCHSR). Through its then Committee on Publications, NCHSR sponsored monographs by Martin Feldstein on hospital care and by Victor Fuchs and Marcia Kramer on physicians' services. Karen Davis worked first at SSA as a Brookings Fellow and then at Brookings. Hers was solid work technically, yet understandable to the intelligent layman. All of this research, I believe, became influential in the subsequent policy debate.

A Reformulation by Subject Area

Interest in subject matter has changed from time to time. Such shifts are due in part to technical developments in economics; or may reflect a sense of scientific impasse on the one hand or an opportunity for scientific breakthrough on the other hand; and finally it may represent mere fad, which is not unique to this field.

In my judgment the discussion of health care financing has been lifted to an appreciably higher level of sophistication and knowledge. I say this, despite the fact that economists missed the problem of provider reimbursement after Medicare and Medicaid, because Martin Feldstein forgot to consider it in his seminal work.

Still under way is the Rand experiment on health insurance and the NCHSR-NCHS survey of consumer health care expenditures. The former was not approved by an ad hoc advisory group and was also opposed by HEW staff. The latter survey, I am glad to report, will employ an improved definition of income.

Donald Yett did good work on the economics of nursing, but took too long in publishing his monograph. Others have done good work on auxiliary health personnel, but I suspect that the recent expansion in the physician supply may have rendered the problem of substitution moot.

Under the influence of the Friedman-Kuznets work and Kessel, some economists have continued to stress the physician shortage. Eli Ginzberg always questioned it, as did Frank Dickinson of the American Medical Association (AMA), until the AMA decided after the 1964 election never again to be on the losing side of a major political battle. Gregg Lewis of Chicago questioned the Friedman-Kuznets findings on technical grounds, as did Lee Hansen of Wisconsin. Finally, so has Uwe Reinhardt of Princeton in his continuing research on physician productivity.

Economists have done good work on the economics of hospitals, which is well summarized by Sylvester Berki of Michigan. Paul Feldstein's dissertation on short-run costs stands up after fifteen years. Good work was done on long-run costs by John Carr, Paul Feldstein, Ralph Berry, Harold Cohen, Judith and Lester Lave at Carnegie-Mellon, and Martin Feldstein; and the profession had the good sense to stop research in 1970, pending improvements in data on patient mix. Robert Evans at British Columbia has picked up this line of research. I have already referred to the work on hospital expenditure increases; even before analysis, economists introduced a firm framework for classifying data, which is capable of displaying annual rates of change in an unambiguous fashion. The framework proved to be very useful and, I believe, important, if description is to point the way to analysis.

All health economists missed the effects of Medicare and Medicaid—we were wrong on use and also wrong on cost or price. It is difficult to judge whether with so many more researchers at work today the same mistakes could happen. Moreover, later work by Karen Davis has demonstrated how unequal in incidence uniform benefits can be.

Starting with Victor Fuchs, some economists have focused on health outcome, on the effectiveness of care. Few, however, succumbed to the easy temptations of Planning, Programming, and Budgeting (PPB). From emphasis on the valuation of benefits economists have moved on to problems of research design: what difference does a given program make? Under the leadership of

Selma Mushkin, the profession is now shifting from the earnings approach of valuation of benefits to the question of willingness to pay. Meanwhile the emphasis in actual research is on cost-effectiveness analysis.

Economists have been favorable toward Health Maintenance Organizations (HMOs) for the most part. Prices and marketlike incentives appeal to them. Surprisingly, economists missed the labor union opposition to the 1973 HMO Act; and they said little in advance about the high voluntary insurance premium that resulted from the broad prescribed-benefits package.

Few economists have worked in health planning. An obvious exception is the Laves' monograph on the Hill-Burton program. I attribute the neglect of health planning to lack of exposure and experience at the local level, where health services are rendered. Economists' exposure to Washington is ample, perhaps too much so. Another notable recent exception to the neglect of evaluation of actual programs in planning or associated regulation is the study by Salkever and Bice of the Certificate of Need procedure. Their study raises problems of data availability and the employment of proxies.

Continuing to be neglected is economic research in mental illness. Frank Sloan made a stab at it. Burton Weisbrod is participating in a true experimental study.

View from Washington, 1976–1977

Last year I spent a sabbatical year in Washington on leave from New York University and as a Guggenheim Fellow. NCHSR furnished a desk and secretary and imposed few responsibilities. I learned that several federal agencies now perform health economics research: the National Center for Health Services Research (NCHSR); the National Center for Health Statistics (NCHS), Division of Analysis; SSA, now Health Care Financing Administration (HCFA); Veterans Administration (VA); Council on Wage and Price Stability; Office of Technological Assessment (OTA); General Accounting Office (GAO); and the Federal Trade Commission (FTC).

The multiplicity of sites for research does not perturb me. I believe that the several agencies do keep informed of others' activities. What does worry me is the quality of the intramural research

work; it could be much better. At HCFA, I think, perhaps less care is exercised today than formerly under SSA.

Most of these agencies, as well as NIH, sponsor outside research. Again, I prefer a multiplicity of funding sources. And again, I think that the agencies do really inform one another. The problem is that applicants for funds do not know who has money and where to apply.

Increasing emphasis on targeted research and contracts leads one to wonder about the payoff. Consultants' reports are long and often go unread.

There must be better ways. Martin Feldstein's and Victor Fuch's books, with reviews by Jerome Rothenberg and Kenneth Arrow, show us some of the possibilities. They were bought cheaply, at \$2,500 each. Of course, Feldstein and Fuchs were being supported by large research grants at the same time. And, it is fair to add, two other volumes commissioned by the same committee did not bear fruit of equal quality.

One hears criticisms of the timeliness and responsiveness of health economics research to real-life problems. My own view of the record is that on the whole it has been good, even when not wise. Too much can be made of the latest fad; often it is an old idea with a slightly new wrinkle.

The problems of health economics research are no different from problems in other research areas, in the matter of quality assurance. The quality of research and measures for maintaining that quality are central. With patience, the application of sound research findings is virtually bound to come; it usually has in the past. The Gottschalk Committee's report is a prime example.

To improve and promote quality in research, we need good training, peer discipline, and a favorable work environment for researchers.

An earlier version of this paper was presented orally by the author, as a member of the Committee on Health Services Research, to the Institute of Medicine, Washington, D. C., on November 6, 1977. It was revised and expanded for publication in the *Milbank Memorial Fund Quarterly*.

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