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ABSTRACT

Recent strategies in managed care and managed competition illustrate how health care reforms may reproduce the patterns of economic organization of their times. Such a reform approach is not a new development in the United States. The work of the 1927–1932 Committee on the Costs of Medical Care exemplifies an earlier effort that applied forms of economic organization to medical care. The committee tried to restructure medicine along lines consistent with its economic environment while attributing its models variously to science, profession, and business. Like current approaches, the committee's reports defined costs as the major problem and business models of organization as the major solution. The reports recommended expanded financial management and group medicine, which would include growth in self-supporting middle-class services such as fee clinics and middle-rate hospital units. Identifying these elements as corporate practice of medicine, the American Medical Association–based minority dissented from the final report in favor of conserving individual entrepreneurial practice. This continuum in forms of economic organization has limited structural reform strategies in medicine for the remainder of the century. (*Am J Public Health.* 1998;88:1721–1726)

Critics fear and supporters celebrate that recent medical care restructuring in the United States represents a sudden organization of medicine as a corporate enterprise managed according to business principles.[1] Yet strategies that apply elements of concurrent economic organization to medical care have a much longer history. This report uses a social history approach that studies past endeavors to reform medicine in order to illuminate contemporary ones.[2] Its thesis is that the 1927–1932 blue-ribbon Committee on the Costs of Medical Care (CCMC) also applied elements of economic organization to medical care. The committee sought to expand the use in medicine of financial management, group organization, and revenue-generating services, which themselves incorporated features of business organization.

Historians have already described the CCMC's beginning.[3] To summarize briefly, on April 1, 1926, 14 leaders representing academic medical centers, foundations, policy organizations, and public health agencies met to discuss medical reform.[4] They appointed 5 of their number to a Committee of Five to develop a proposal for a large-scale study. Chaired by Winford H. Smith, director of the Johns Hopkins Hospital, the Committee of Five also included Lewellys F. Barker, former professor of medicine at Johns Hopkins; Michael M. Davis, sociologist and administrator, soon to be with the Julius Rosenwald Fund; Charles-Edward A. Winslow, professor of public health at Yale; and Walton H. Hamilton, professor of economics at the Robert Brookings Graduate School of Economics and Government. Harry H. Moore, economist for the US Public Health Service, staffed the committee.[5]

The Committee of Five presented an ambitious research proposal a year later at its May 17, 1927, invitational Conference on the Economic Factors Affecting the Organization of Medicine.[6] This conference formally established the proposed committee and selected a few of the conference participants to constitute its membership, which would subsequently expand to more than 50 members. The committee met briefly on the following day, named itself the Committee on the Cost of Medical Care, and elected academic physician Ray Lyman Wilbur as chairman.[7] Wilbur was president of Stanford University, a member of the Rockefeller Foundation (one of the CCMC's funding foundations), and former president of the American Medical Association, among his many positions. He would also simultaneously serve as President Herbert Hoover's secretary of the interior. Bridging the spheres of academia, medicine, philanthropy, and government, Wilbur was chosen to be a "man for all factions."[8]

The CCMC's Economic Purpose

Many of the CCMC's studies over the next 5 years assimilated forms and ideas of the economic organization of the times. The committee was explicit about its economic purpose.[9] It defined the problem it was addressing as the "cost" of medical care. Cost meant in part that middle-class people often could not afford higher-priced technologic and specialty services. The first item on the May, 1927, agenda was "the inability of the people to pay the cost of modern scientific medicine."[10] The supply side of this concern, as the committee expressed it, was the "crisis in hospital finance."[11]

The CCMC's proposed solution to both problems was to reform the "deficiencies of the present economic organization of medicine," as a confidential report to the executive committee phrased it.[12] The CCMC's

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projected *Five-Year Program* identified the "ultimate question" to be the best organization offering the "most efficient production of service."[13] The committee's summary volume, *The Costs of Medical Care*, similarly defined its purpose to be diagnosis of the "economic organization of medical care"; it defined such organization as the "methods of producing and financing medical services."[14] This report focuses on the recommended production methods rather than financing, a topic that has been covered much more extensively in the literature.

Most historical investigation of the CCMC has emphasized its broad spectrum of features and motives, rather than its economic elements. Paul Starr associated its recommendations with expanded access and increased professional power as well as with bureaucratic organization.[15] Rosemary Stevens credited the committee with valuing entitlement to scientific medicine for the whole population.[16] Calling CCMC reformers "altruistic," Forrest Walker contended that they had not intended to change existing medical institutions radically.[17] Differing with Walker on the extent of desired change, foundation director Steven Schroeder distinguished CCMC encouragement of group medicine on the basis of quality of care (as he saw it) from the financial strategies of managed care in the 1970s.[18]

My view of the CCMC's endeavor to restructure the organization of medicine along the lines of the economy is consistent with the work of investigators like Stephen Kunitz, who saw it as an early effort to "rationalize" medicine economically.[19] Similarly, Roger Battistella and David Smith viewed the CCMC's work as an attempt to restructure medicine along "corporate lines."[20] The present report contributes to this literature by identifying the specific economic forms that the CCMC tried to incorporate into medical care. It examines the components of economic organization described in the archives and voluminous reports of the CCMC as well as in the work of its leaders and dissenters. This report does not dispute the committee's beneficent intentions, nor does it pretend to offer a comprehensive view of the CCMC opus on public health, prevention, financing, and access. But the committee's leaders did not see an either/or issue of access and quality vs economy. They assumed that reforms in economic organization would contribute to quality, access, and efficiency. They promoted models of economic organization, and they honestly believed (as did their opponents) that their preferred models provided the best that medicine could offer.

CCMC leaders believed in the scientific nature and therapeutic power of 20th-century medicine, as historian and foundation director Daniel Fox attested.[21] To Fox, the report titled *The Crisis in Hospital Finance* indicated that CCMC leaders saw changes in society as "subordinate to changes in medical science as determinants of economic relations between physicians and patients."[22] I find that the report attributed the need for change equally to science and economics. It affirmed that "the advance of the science and art of medicine, on the one side, and the economic development of twentieth-century America, on the other, compel changes in the forms of medical practice."[23] The subject of this report, however, is not determinants of change but the nature of the chosen forms. Although CCMC leaders attributed the *need* for change equally to science and economics, they generally *identified the necessary structures* as forms of economic organization. They did not develop a mode of organization unique to medical science, nor did they claim to do so; they looked to the economy for their models.

Social Reform Context

The CCMC established itself near the end of an organizational revolution that transformed the American economy. In the late 19th and early 20th centuries, large-scale production and corporate organization had developed as the dominant forms of economic activity.[24] These organizational forms became the standard that reformers applied across a wide range of institutions.[25] Social reform and thought were reinforced by a social science that assumed an evolutionary development of capitalism in stages, from individual to corporate production.[26] Reforms of the "New Era" or "New Economic Era" of the 1920s fused this social science with business management.[27]

Some historians have described Herbert Hoover as a key leader in the New Economic Era's efforts to re-form industrial organization. Their work revises conventional views of Hoover in terms of liberal vs conservative. Ellis Hawley, for example, argued that Hoover "preached the gospel of efficient production and scientific management" while simultaneously proclaiming constancy to "competitive individualism."[28] As secretary of commerce and as president, Hoover proactively worked with colleagues such as Interior Secretary Wilbur to regulate and reconfigure industries and services.[29] He was familiar with the CCMC's work, which was consistent with his activities to reorganize industry. Funded by 8 private foundations, the CCMC project fit Hoover's premise that foundations should play a key role in democratic social planning.[30]

The CCMC did not just follow the social reforms and theories of the New Economic Era. Some of its members were social scientists deeply engaged in developing the theories. Economist Wesley C. Mitchell's work, for example, framed a theoretical basis for Hoover's attempts to "rationalize" industry and to ameliorate recessional phases of what Mitchell called business cycles.[31] A number of CCMC studies used sociologist and CCMC member William F. Ogburn's theory of cultural lag to diagnose problems of medical care. Fox interpreted the CCMC's use of cultural lag as a "convenient metaphor" for reorganizing medical care.[32] But it was more than a metaphor; it was a strategy that related directly to the desired restructuring. The economists on the committee used the theory of cultural lag to mean a failure of the development of the economic organization of medicine to keep up with the development of economic organization in industry.

As chairman of Hoover's Research Committee on Social Trends, Wesley C. Mitchell identified one of the trends as a "conscious drive to make our economic organization meet the need of the time." And, he said, there had been a "lag in this process."[33] Mitchell similarly compared the stage of medical development at the time with early stages of mechanization in industry.[34] "Most all doctors are economic Rip Van Winkles," CCMC Chairman Wilbur once commented; "we have been asleep during the period of the world's greatest social and economic advances. We are economic misfits."[35]

Business Models of Medical Organization

To advance medicine's economic organization, the CCMC turned to business models. The Committee's report *Capital Investment in Hospitals* explained that the hospital's large capital investment meant that it had become a "place of business, and its business is medical care."[36] The report did not see medicine as all business, however. It went on to say that the hospital was "at once a hotel, an industrial plant, a repair and rehabilitation shop, a haven of refuge, . . . and an educational institution."

Hospitals were in many respects "typical of all business enterprise," maintained another report.[37] Yet, the report continued, even when organized as business, hospitals maintained a spirit of public interest. Combining business structures with service motives, the CCMC majority and staff seemed to assume that medical care could be structured as business and still function as service. Accordingly, C.-E. A. Winslow,

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chairman of the Executive Committee, answered yes to his question, "Can the business analogy, however faulty and incomplete, help us towards methods of realizing the nobler functions of medicine as an art and a science and a profession?"[38] Such a dual perspective of service and business continued throughout the CCMC's work.

In addition to service, CCMC reports associated their recommended reorganization of medicine with the widely popular image of efficiency. Comparing medical delivery with "production in any industry," *The Fundamentals of Good Medical Care* defined the reorganization goal as producing the "maximum amount and the highest quality of service with the minimum of wasted effort."[39] I am arguing not that such a concept of efficiency drove CCMC reforms but that CCMC reports linked the concept to particular components of structural reform. As the remainder of this article will show, the reports attributed enhanced efficiency to each of their recommended organizational forms.

Historian Douglas Parks has made the case that CCMC leaders knew before completing their scientific studies what forms of reorganization they wanted to promote.[40] Many of them had, in fact, promoted comparable forms for a decade or more. As director of the 1920 Cleveland Hospital and Health Survey, future Executive Committee leader Haven Emerson had advised applying to hospitals the same "principles of organization and efficiency" as "up-to-date business enterprises."[41] Before most of the CCMC's research was finished, the confidential report identified group medicine, pay clinics, and middle-rate services as its top 3 reform priorities.[42] The following sections examine in more detail the business features of the CCMC's recommended reforms in medical delivery: financial management, institution-based group organization, and revenue-generating services.

Financial Management

Early 20th-century development of hospitals vastly increased their capital intensity. To many reformers of the time, this capital expansion mandated managing hospitals as businesses. As historians Morris Vogel and David Rosner demonstrated, hospital administrators increasingly adopted techniques of business management.[43] To be sure, business management was not applied as rigorously in hospitals as in factories,[44] and hospitals' "multifaceted historical mission" also shaped management practices.[45] Yet CCMC supporters such as business executive Julius Rosenwald, whose foundation contributed to the CCMC and employed Michael M. Davis, continued to promote further business management. Rosenwald advised hospital administrators attending the 1930 meeting of the American Hospital Association that private sources of capital were requiring more control and more accountability with regard to its use.[46] CCMC reports correspondingly promoted ongoing efforts to apply to medicine methods of accounting[47] and other managerial "techniques borrowed from industry."[48]

The CCMC's final report, *Medical Care for the American People*, advised establishing local or regional coordinating agencies in order to control an area's capital investment. These agencies would organize the medical producers and consumers in the area[49] Also implying some form of democratic control, staff member C. Rufus Rorem used the phrase "the public's investment" to emphasize that approximately half of the $3 billion invested in hospitals had originated in public funding.[50] Yet the final report also described a partnership between medical professionals and the owners of capital, and it delegated financial responsibility to the owners.[51] Regardless of the extent to which the CCMC designated capitalists, experts, or "the public" to manage hospital expenditures, the committee's proposals would have reduced the power of organized medicine and increased that of the owners of capital.

In a campaign against institutional medicine and its shifting control, the American Medical Association's Bureau of Medical Economics charged the CCMC with making a "false analogy with industrial capital."[52] The bureau challenged the CCMC's $3 billion appraisal of the hospital system in terms of exchange value. In contrast, the bureau director maintained, accumulation of scientific knowledge was the chief capital investment in medicine.[53] This kind of capital, he asserted, did not encourage growth of productive units, it did not usually return a profit, and most importantly, it did not "confer on the owners the power to control the employment and the actions of the physicians."[54]

In contrast to the bureau's denial of profit making, Committee of Five and CCMC member Walton Hamilton advocated an institutional nonprofit status over what he saw as a profit-making dynamic of private practice.[55] CCMC leaders' interest in financial management was not for the purpose of establishing profit-making institutions that would generate a surplus for owners. Davis and Rorem emphasized that most of the capital invested in hospitals was "social capital," by which they meant that it was invested for nonprofit purposes.[56] The committee's promotion of nonprofit status was consistent with Hamilton and Mitchell's belief as institutional economists that the profit motive should (and could) be separated from the economic activities of enterprise.[57] Nonprofit hospitals would be structured and managed like businesses in terms of managing capital and promoting self-supporting services, but they would reinvest any surplus in further institutional growth.

CCMC leaders supported managerial strategies designed to maximize hospital growth and productivity, and they assumed that these strategies would also maximize utility. A CCMC credo was that increased utilization of scientific (generally meaning specialty) services and equipment would increase benefits to the population.[58] Yet promoting utilization had a strong element of finance as well as beneficence. CCMC reports expected that increased hospital occupancy would enhance productivity of the invested capital.[59] *The Crisis in Hospital Finance*, a collaborative publication with the Julius Rosenwald Fund, reflected concerns that Rosenwald had expressed at the 1930 American Hospital Association meeting. It criticized the inefficient use of large amounts of capital (which had been "diverted from business").[60] *Costs of Medical Care* correspondingly advised hospital administrators that the large capital investment could be justified only if their facilities were used at "maximum capacity."[61] The committee recommended group medicine as the form of organization that could best maximize productivity.

Institution-Based Group Organization

Before the CCMC's formation, its organizers had promoted the concept of group medicine as a way to coordinate specialists and provide an efficient form of organization. In a 1919 issue of the *American Journal of Public Health*, Davis praised group medicine for applying principles of business organization to medicine.[62] One such principle was maximizing utilization of specialty personnel and equipment. Committee of Five and CCMC member Lewellys Barker similarly described group medicine as "large-scale production" of medical care.[63] He endorsed the "commercial spirit" it brought to medicine.[64]

CCMC reports examined a variety of organizations that had in common an institution-based organized group of physicians. *Private Group Clinics* identified the characteristics of such groups as shared use of facilities and equipment, full-time salaried specialists, and the charging of fees for services.[65] It described the "dual character" of such groups: on the one hand, they were "cooperative ventures"; on the other, they

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were highly capitalized "business organizations."[66] The authors of *Costs of Medical Care* appreciated that organizing specialists into groups represented the next step usually followed in making production more efficient.[67]

Recommendation number 1 of the CCMC's final report advised that medical care should be delivered by groups, preferably those organized around hospitals.[68] An April 1931 internal discussion paper prepared for the executive committee had apparently attempted to define the desired organization in greater detail. Identifying the question as which form of organization offered both the highest quality of care and the most economic use of capital, it offered 2 alternative answers. The first succinctly stated that the then-current organization was sufficient and "probably not far behind the mercantile industries in efficiency of organization." The second choice was considerably more detailed and indicated that "economies through mass production" could be achieved by building highly equipped group facilities operated by professional managers and salaried personnel.[69]

The major conflict within the CCMC was between advocates of institution-based group practice and those of individual practice.[70] The final report soft-pedaled the leaders' goals to such an extent that Edgar Sydenstricker of the US Public Health Service and the Milbank Memorial Fund (the leading CCMC-supporting foundation) and Walton Hamilton each wrote dissenting remarks. But the final report's weakening was not enough to prevent 9 members, including 8 of the 27 physicians, from dissenting from its support of institution-based medicine. Although often ridiculed, the American Medical Association–based minority report rather accurately portrayed the majority's recommendations as "corporate practice of medicine."[71]

Many of the organizations that the CCMC surveyed had forms of group payment as well as group delivery. The CCMC-supporting Twentieth Century Fund promoted prepaid group practice, which its founder, Edward Filene, compared to "modern business practice."[72] A letter from the director of the fund to Executive Committee Chairman Winslow commended Winslow's encouragement of group practice combined with group payment. But the director chided Winslow for condoning the management of insurance funds by "outside" organizations instead of by medical centers themselves.[73]

The final report envisioned that community hospitals would develop into comprehensive groups organized as corporations, which it called "community medical centers." Where such an organization could not be achieved, CCMC leaders advocated more limited forms of group organization that linked high-level hospitals with networks of affiliated physicians. Rorem later described affiliated physician use of hospital services as "group practice a la carte."[74] In this sense, group organization became a prevalent form of organization. As another way to achieve a limited form of group medicine, the final report recommended further development of pay clinics and middle-rate hospitals.[75]

Revenue-Generating Services

Hospitals, specialty clinics, and academic medical centers had been developing revenue-generating services for several decades. Michael M. Davis organized the ophthalmology clinic of the Boston Dispensary as a fee service in 1913. The clinic was held in the evening for working people who were able to pay its costs.[76] Its fee structure covered all the dispensary's expenses and included a flat fee for its specialists.[77] Davis subsequently assisted Cornell University and the University of Chicago in designing their pay clinics. In his work for the Cleveland Hospital and Health Survey, Davis classified pay clinics and hospitals as "public services" because they were open to all, not just the poor.[78] He did not note any contradiction when he also defined pay clinics as a "cooperative practice of medicine on a business basis."[79] By "business basis," Davis specifically meant the employment of salaried specialists and patient fees.[80]

After earlier growth in private pavilions for the wealthy, much of the boom in hospital construction of the 1920s involved semiprivate rooms and middle-rate units for middle-class patients.[81] By the middle of that decade, fee services provided voluntary hospitals with one half to two thirds of their operating revenues.[82] At the same time, state welfare departments were investigating the extent to which public hospitals could also establish rates that covered their costs.[83] Yet reform leaders pushed for more fee services. In the early months of the Depression, Rosenwald told American Hospital Association members that "to meet the new economic order" they had to reduce their charity services and further expand their fee services.[84]

CCMC reports promoted continued growth in fee clinics and middle-rate hospitals. Arguing that the wealthy could pay for specialty services and the poor received such services from medical trainees, the CCMC's concern about access focused primarily on the estimated 75% to 90% of the population comprising people of "moderate means."[85] It was the middle-class population that offered a solution to the crisis in hospital finance and that provided a large potential market for fee services. The CCMC report *Hospital Service for Patients of Moderate Means* praised the newly constructed Baker Memorial at the Massachusetts General Hospital and the high proportion of pay beds in the new Columbia-Presbyterian Medical Center in New York.[86] It stipulated that all such services should be "economically self-supporting."[87]

Crisis in Hospital Finance similarly proposed that all hospitals that received private patients should operate on a fee basis rather than a charitable basis. It advocated use of standardized accounting methods so administrators could accurately identify their "revenue-producing departments."[88] Accounting also enabled administrators to set the price of each service at full cost, including the service's fixed costs.[89] This pricing principle, identified also as a measure of efficiency,[90] was deemed "no less desirable in medicine than in industry."[91] Once the actual cost was determined, it would be a managerial decision whether or not to charge the full amount in individual cases. It was noted, however, that hospital administrators were beginning to define setting prices lower than full cost as unfair competition.[92] The principle of self-support thrust hospital services and group medicine into the market. It increasingly compelled them to compete for paying patients, to manage their institutions according to the bottom line, and to restructure their services, despite their service missions.

In this report I have examined features of economic organization in the CCMC's reorganization strategies in financial management, institution-based group organization, and fee services. The CCMC did not originate the incorporation of business components into medical care, but it put them on the 20th-century medical reform agenda. In the process, it also invented the social and economic aspects of what is now called health services research.[93] It valued efficiency and accountability, economic concepts congruent with its recommended business components. Did CCMC leaders use the imagery and language of business as analogy and rhetoric in their arguments? Of course they did, as did their opponents. Both sides also used the rhetoric of science, service, and the doctor–patient relationship. But the CCMC's reform model was not just analogous to business; it incorporated business components with inherent economic dynamics.

Past and Present

The decade of the 1990s, which has seen consolidation of institutions, physicians, and insurance into corporate structures, has been

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called the "Economic Era of Health Care."[94] But it is not such a leap as commonly thought from health reform in the New Economic Era to reform in the Economic Era of Health Care. The CCMC also tried to integrate doctors and hospitals (and sometimes payments) into corporate organizations. The recent managed care "revolution" has further developed the business components that the CCMC recommended: financial management, group organization, and selective development of revenue-generating services. The extent to which delivery organizations or insurance companies should control payments is still a significant issue. From the time of the CCMC and its minority report, reforms in medical delivery have portrayed the organizational choice as 1 of 2 business models: either individual entrepreneurial or institutional corporate models. This dualism has restricted serious search for alternative forms of medical care organization. □

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