Designing HIGH-COST Medicine

Hospital Surveys, Health Planning, and the Paradox of Progressive Reform

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Inspired by social medicine, some progressive US health reforms have paradoxically reinforced a business model of high-cost medical delivery that does not match social needs. In analyzing the financial status of their areas' hospitals, for example, city-wide hospital surveys of the 1910s through 1930s sought to direct capital investments and, in so doing, control competition and markets. The 2 national health planning programs that ran from the mid-1960s to the mid-1980s continued similar strategies of economic organization and management, as did the so-called market reforms that followed. Consequently, these reforms promoted large, extremely specialized, capital-intensive institutions and systems at the expense of less complex (and less costly) primary and chronic care. The current capital crisis may expose the lack of sustainability of such a model and open up new ideas and new ways to build health care designed to meet people's health needs. (*Am J Public Health*. 2010;100:223–233. doi:10.2105/AJPH.2008.155838)

POLICY ADVISORS PORTRAY

"relentless" growth in medical costs as a major threat to US business as well as to equitable health reform.[1] Many recognize that the inflated costs of existing services are not always consistent with higher quality.[2] Reflecting the identification of hospitals as the most intrinsically costly factor in health care delivery,[3] the *New York Times* has called for economic reforms to enhance their efficiency and productivity.[4] Although such measures seem basic, similar economic priorities in past reforms contributed to the building of high-cost institutions and systems in the first place. Often blamed on (or credited to) recent so-called market reforms, business models of medicine that have overshadowed potential social models have a much longer history.

More than a century ago, the *New York Times* charged that hospitals were not being managed according to "sound business principles," meaning that they were depleting their capital to meet operational expenses.[5] Reiterating the newspaper's proposal of organizing hospital systems, and presaging debates to come, Joseph Weber of the New York State Charities Aid Association offered the quintessential Progressive Era choice between laissez-faire markets and planning. Reformers could accept the "haphazard, higglety-pigglety, inefficient way of organizing hospitals" or adopt the "orderly, scientific, efficient way" of the hospital survey.[6]

I analyze economic strategies of the privately conducted hospital surveys of the 1910s through 1930s and compare them with similar approaches in the 2 government-sponsored health planning programs that ran from the mid-1960s to the mid-1980s. In seeking to concentrate capital in preferred institutions and control their market structures, the planning programs continued economic strategies of the surveys. Progressive reformers paradoxically offered a vision of social medicine while promoting a business model of hospital organization that contributed to the growth of large, complex, costly hospitals.

PROGRESSIVE REFORM CONTEXTS

But what makes such reforms progressive? Portrayed as "different from the prevailing business culture of the time,"[7] Progressive Era reform expressed ideologies and values of organizing society

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Marketing to the growing hospital industry.
Source. Hospital Management (September 1930), 73.

to meet people's needs. Its reformers looked to planning and regulation to control market excesses and ameliorate unhealthful conditions of industrialism. Yet there were often contradictions between reformers' values and their strategies.[8] Progressive Era reforms as well as the New Economic Era reforms that followed in the 1920s paradoxically applied economic tactics and business management techniques to social organization and services.

H.S. Person, managing director of the Taylor Society for the Advancement of Management, referred to planning as an extension of scientific management to industry as a whole.[9] Coming out of "corporate management with its allies in philanthropic organizations and premier private universities,"[10] planners strove to counter populist ideas of property redistribution[11] and maintain the "existing economic order."[12] Corporations and trade associations turned from laissez-faire to strategic planning to promote economic growth and mitigate the instabilities of competition. Specifically, they sought to restrict entry into a profession or industry, standardize techniques, equilibrate production and consumption, concentrate capital, and expand market shares.[13]

Professional associations and their planners applied this business model to social services.[14] As historian Guy Alchon discerned, survey and other planning techniques embodied a progressivism that fused business management with social science and offered "organizational solutions to economic and social problems."[15] Historians Samuel Hays and Robert Wiebe each showed how progressive reformers used structures of contemporary economic organization, including those of the corporations and monopolies they were ostensibly opposing, as the development model for nonprofit institutions in education, welfare, and medicine.[16]

At the same time, progressive reform was noted for its concern with social justice.[17] Health care reformers earnestly believed they personified the elite Progressive Era concept of "social-trustee professionalism."[18] They portrayed planning as a means of achieving a more even distribution of the products of the economy, although not necessarily questioning their production. This dichotomy was inherent in social medicine.

Physician and historian George Rosen defined social medicine in terms of treating the social and economic roots of illness.[19] Reflecting his experience as administrator of a large, centralized organization,[20] however, Rosen simultaneously assumed that progress in medicine required large-scale organization, functional division of labor, and management for efficiency and productivity.[21] Historian Elizabeth Fee[22] noted that, like Rosen, Johns Hopkins professor Henry Sigerist assumed that scientific and technological development was inherently progressive.[23] This development, he believed, supported his work with foundations and other academic leaders in organizing medical care "without challenging the political and economic foundations of American society."[24]

Public health economist Edgar Sydenstricker's forceful affirmation that society had a basic responsibility to assure healthful conditions might have laid down such a challenge. Sydenstricker moved toward developing population-based health planning in his 1927 Hagerstown, Maryland, morbidity survey. Yet his proposed

epidemiological approach of matching the supply of nurses, doctors, and hospitals with the prevalence of illness[25] was for the most part ignored. Sydenstricker himself went on to define the health care problem as inefficient "economic organization," defining its solution in terms of centralizing specialty care and its equipment.[26]

Ironically, the limits of progressive reform have been bound by historical ideas of progress. Assimilating prevailing forms of economic thought, health care reformers accepted prevailing definitions of progress as continuous economic growth based on ever-expanding fixed capital and technological development in select institutions.[27] Hospital surveyors as well as health planners assumed an evolution from individual entrepreneur to corporate organization of large concentrations of capital in a controlled market economy.[28] Columbia University professor Haven Emerson, who supervised many hospital surveys, believed that economic and social (as well as biological) evolution meant differentiation from simple to complex, generalized to specialized, and individual to collective.[29] Hospital surveys promoted just such a developmental model.

HOSPITAL SURVEYS

With origins in 19th-century sanitary planning in France, England, and the United States,[30] surveys bloomed as a form of health policy methodology. US reformers conducted more than 200 hygiene, morbidity, and public health administration surveys before 1920.[31] They also initiated a more limited set of hospital surveys starting in the Progressive Era and continuing well into the New Deal. Health surveys continued their broader agenda as hospital surveys gained in policy influence.

Abraham Flexner's 1910 Carnegie Foundation report was "typical of the agenda-setting surveys of the Progressive Era" in combining reform with business organization.[32] Exposing unscientific (not to mention unsanitary) conditions in poorly equipped and staffed, often proprietary, medical schools and their hospitals, it envisioned a nationwide network of academic centers, a concept that persisted throughout ensuing surveys.

After Flexner, the American College of Surgeons, the American Medical Association, and the American Hospital Association each initiated nationwide hospital surveys. While aptly characterizing the associations' surveys as competitive bids to represent the hospital industry, some historians labeled them a "grand irrelevance" that produced questionable data.[33] However, the surveys' relevance resides in the nature of the data they collected.

Hospital industry surveys measured institutional size, specialty department organization, technological equipment, average length of stay, utilization rates, patient payment status, revenues in relation to expenses, total assets, teaching status, and outreach areas. These measures provided the basis for hospital standardization. As economist S.E. Berki maintained, "analysis *is* advocacy."[34]

City-wide hospital surveys applied similar measures to their particular areas. These measures—in addition to more direct efforts—sought to control capital investment in hospitals and reconfigure hospital market structures. The combined strategies reinforced the growth of large, centrally managed, revenue-generating specialty departments in acute care hospitals serving defined market areas.

Philadelphia, Pennsylvania

The Philadelphia County Medical Society's Committee on Hospital Efficiency surveyed the financial status and technical capacity of its area's hospitals in 1913. Physicians were clearly active on this and subsequent hospital survey committees, but it was not medical or scientific expertise that drove them; it was business expertise. Appealing to "every business man who is either a trustee of, or a large contributor to, any of the 55 hospitals in Philadelphia," the committee sought to reduce competitive duplication of services, envisioning hospitals' collective assets as an industrial corporation worth $20 million.[35] It proposed capital accounting methods to increase efficiency and manage the use of growing fixed capital.

Cleveland, Ohio

Whereas foundations played a significant role in national health policy, it was local business-organized community chests that sponsored the Cleveland Hospital Council's 1920 survey and many other city-wide hospital surveys.[36] The Cleveland survey correspondingly envisaged its donors as "investors in the Community Fund" and "stockholders" in the institutions supported by it.

Haven Emerson, who would go on to serve as president of the American Public Health Association (APHA) and who was characterized as "easily and usefully irritated to action," directed the Cleveland survey.[37] Emerson was well aware of wider survey trends, calling Pittsburgh's 1909

survey of poverty and ill health the beginning of a "new era in social as well as sanitary history."[38] But Emerson and his colleagues, including health care administrator Michael Davis, did not recapitulate such an appreciation of social medicine in their hospital surveys. Cleveland's survey ranged in focus from public health administration to management of hospital revenues and expenditures.[39]

Cleveland's follow-up evaluation concluded that its survey resulted in several successful outcomes, including directing bond-issue and community chest dollars to a new city hospital. The evaluation partially credited the survey with furthering accounting systems that permitted "budget planning and comparative studies of hospital performance." It advised that the survey more than paid for itself by furthering hospital consolidation in a new complex of institutions at the Western Reserve medical school.[40]

New York City, New York (1924)

In New York City, local donors were also national foundations. The Commonwealth Fund supported the New York Academy of Medicine's 1924 survey of a "farrago of hospital services" that went "unguided by a community policy concerning the need of further services."[41] Even before the survey's completion, the academy promoted "more uniform methods of statistical and financial accounting" and "more cooperative business arrangements" to control growth, attain economies of scale, and supply information to "the public," which seemed to comprise "benefactors, trustees, and architects."[42]

St. Louis, Missouri

St. Louis's Community Fund commissioned the APHA Committee on Administrative Practice to conduct its 1927 hospital survey.[43] Directing its contributions to 14 of the city's 22 voluntary hospitals, the Community Fund was concerned with the millions of dollars spent on initial investment and operating expenses. Yet, the survey justified the city's large numbers of hospital beds (relative to the APHA standards) in terms of its prominence as a regional medical teaching center. As was the case with so many cities' surveys, the report proposed establishing a hospital council to organize centralized purchasing, bill collecting, and accounting. Use of capital accounting was also a major focus of an ambitious national study employing survey (among other) techniques.

Committee on the Costs of Medical Care

With Emerson, Davis, and Sydenstricker in its leadership and funded by 8 major foundations, the 1927 to 1932 Committee on the Costs of Medical Care (CCMC) conducted and commissioned a range of studies designed to formulate health care policies. The committee's more conventional historical reputation for supporting universal access,[44] although not inaccurate, rejects or at least neglects CCMC's economic priorities.[45] Its surveys examined economic variables including total capital investment, physician incomes, revenues related to expenses and fixed costs, and families' ability to pay. These measures reflected the committee's concern with "the crisis in hospital finance."[46]

Significantly, a CCMC report also included the use of epidemiology-based health planning methodology. A number of the committee's surveys measured illness prevalence, and its *Fundamentals of Good Medical Care* report developed measures of population need for services based on morbidity rates and treatment requirements (the latter were contingent on physician opinions).[47] It was a lone effort, however. Given that the CCMC had "dealt chiefly with economic aspects," Michael Davis advised that there remained a serious need for research on social aspects of medicine.[48] George Rosen also viewed the CCMC's "almost exclusive concentration on the economic aspects of medical care" as a major step away from social medicine.[49]

The CCMC terminated in the Depression, a period that seriously exacerbated hospitals' financial problems. Relief agencies expanded their participation in hospital surveys, but the subsequent reports were not substantively different in perspective and remained resolutely voluntary in the face of New Deal governmental planning.

Boston, Massachusetts, and Chicago, Illinois

Mid-1930s surveys conducted in both Boston and Chicago were concerned with hospitals' ability to pay mounting debts. Chicago reported that debt was a "heavy burden" for the 64% of the city's hospitals with outstanding loans and mortgages as well as for the patients, taxpayers, and donors paying interest on the debt.[50] The Chicago report criticized one "luxuriously appointed hospital" that was built on borrowed funds and then appealed to the city for financial assistance when its beds went empty. Boston also reported that its high-debt hospitals were having trouble paying interest

"In promoting voluntary planning, Emerson and much of the hospital industry itself (although clearly not all hospital surveyors) adamantly disagreed with New Deal planners who by that time posited an active role for government in managing health care evolution."[64]

costs and recommended that they adopt the managerial measures employed by for-profit organizations.[51]

New York City, New York (1937)

New York City's 1937 United Hospital Fund survey combined many features of preceding surveys. The survey administrators explained that their purpose was to manage capital and operational costs of area hospitals[52] and develop an empirical base for the economic evolution of organized facilities.[53]

Survey director once more, Haven Emerson led committee deliberations on how to transform what a draft discussion paper called an "individualistic and highly autonomous set of institutions" into a "coordinated system." To control capital investment, the draft proposed requiring "certificate[s] of necessity" before any hospital could build, add new capacity, or establish new locations.[54] Some committee members balked at such an intrusion on their own managerial powers. Willard Rappleye, dean of Columbia University's medical school, maintained that central control would destroy hospitals' individuality. As commissioner of the city's Department of Hospitals, S.S. Goldwater disparaged the idea as "illogical," "useless," and "idealistic." The meeting passed a motion postponing the "whole question," although it would arise again.

Emerson tried another way to steer an economic approach. He—or his staff—drew up a list of agenda-driving questions that inquired about hospitals' "net financial results" and "economic policies."[55] The questions pointedly asked how much capital investment was devoted to each institution and how the institution planned to safeguard its perpetuation. Any discussion this list may have engendered does not appear in the survey files, but the questions alone reveal the survey's concerns. The study's final report criticized hospital trustees for not maintaining the "worth of property investment" by factoring technological obsolescence and depreciation into hospital charges.[56]

The New York survey reports diagnosed "extravagant" costs[57] generated by a "truly colossal investment of the community in the erection and operation of hospitals."[58] The reports attributed these high costs to an oversupply of services and wasteful overhead expenses incurred in managing an inventory of 814 separate units. In so doing, the reports challenged the dilution of capital across a large number of institutions in favor of fewer, more capital-intensive (and higher-cost) institutions.

Calling on city planning's optimistic vision of a unified regional transportation system,[59] the survey prescribed planning as a means of tackling hospital expansion driven by "selfish ambitions not in accord with the public interest."[60] Despite the committee's earlier balking, the survey recommended a certificate of necessity review of all major capital expenditures across all hospitals.[61] The proposed hospital council would be expected to use such reviews to concentrate institutional and financial resources.[62]

The survey rejected "compulsion by law," contending that voluntary hospital councils offered the functional equivalent via "competent authorities."[63] In promoting voluntary planning, Emerson and much of the hospital industry itself (although clearly not all hospital surveyors) adamantly disagreed with New Deal planners who by that time posited an active role for government in managing health care evolution.[64] Hospital surveys remained in the private planning domain that assigned self-governing trade associations (hospital councils) to collect data, regulate investment, and concentrate production (medical delivery) to reconfigure the market structure of hospitals and reduce their "idle property investment."[65]

Catering to the private donor constituency, the New York survey identified its reports as "stockholder's balance sheet[s]."[66] At the luncheon celebrating the survey's completion, Claude Worrell Munger, president of the American Hospital Association, told invited diners that the survey offered them a catalog of their property in terms of cost, income, and financial equity.[67] Charles Gordon Heyd, president of the American Medical Association, supported the proposed actions as a means of recouping the "frozen capital" (and consequent "frozen income") tied up in small, underused hospitals. Hospital Fund president David McAlpin

Pyle endorsed planning as a means of consolidating "isolated and independently run units." The Health and Hospital Council of Southern New York, as the proposed hospital council would eventually be called, constituted itself the following year to review all hospital capital expenditure proposals in the greater New York City region.[68]

Other Cities

A very brief look at surveys conducted in other cities reveals economic tactics similar to those discussed thus far. As chairman of San Francisco's community chest hospital committee, Stanford University president Ray Lyman Wilbur oversaw its 1923 survey that advised restricting general hospital growth while recommending that Stanford (but not its tax-supported rival, the University of California) receive special funding consideration as an academic institution.[69] The Bethlehem Steel Company in Pennsylvania cosponsored its city's "survey" (of a single hospital) around the same time that its chairman, Charles Schwab, warned that the industrial building boom was waning and that large corporations were seeking to employ their capital in overexpanding hospitals and other elements of community infrastructure.[70]

In the midst of concerns about "idle" beds and capital, Cincinnati's 1925 survey, chaired by A.C. Bachmeyer, dean of the city's medical school, charged that empty hospital beds were wasting community chest dollars and recommended a moratorium on adding acute care beds.[71] The 1929 Newark, New Jersey, survey sought central management of a coordinated hospital system.[72] The 1931 survey of Kansas City, Missouri, sponsored by the city's Chamber of Commerce, examined specialty department organization and attributed hospital occupancy rates lower than 80% to 85% to bad management.[73] And Philadelphia, in another survey in 1938, proposed regional planning to reduce excess capacity and concentrate resources.[74]

Survey Summary and Analysis

The surveys from the Progressive Era through the New Deal demonstrate the extent to which a wide range of cities chose this reform method to shape hospital development. The surveys show that, contrary to a range of historical interpretations,[75] economic strategies have played a leading role in health reform activities for more than a century. Policies contributing to the "making of a vast industry"—to use sociologist Paul Starr's description, if not his timing—started at least as early as Progressive Era hospital surveys. "It is not coincidental," historian Rosemary Stevens noted of hospital development even earlier, "that American hospitals have been among the most luxurious and costly structures ever built."[76] Hospital, medical, and business leaders acting together promoted highly capitalized, high-cost medical institutions and, in so doing, raised systemic costs.

None of the hospital surveys employed all of the tactics discussed here, and the surveys did not always use economic terminology to describe the strategies used; in essence, however, they promoted methods that controlled capital investments and markets. To manage investments, surveys appraised hospitals in terms of financial assets and concentrated capital in an effort to maximize efficiency and productivity via full-capacity use of facilities and technologies. To manage markets, surveys sought to consolidate hospitals, control competition, confer competitive advantage, and build oligopolistic market structures.

What were these tactics, borrowed from profit-making industry, all about in nonprofit institutions? They were not necessarily about individual financial incentive, as market theory propounds. They were about concentrating wealth and power in dominant medical and business institutions.

Assuring that "the community" would benefit from their recommended actions, some surveys specified that they meant the community of health care experts[77] or "financing constituencies."[78] These constituencies were often firms seeking to organize local hospitals in the manner of industry.[79] Yet, the power business sought seems to have exceeded its financial contribution. Revenue (rather than capital) studies revealed that, relative to patient fees and taxes, donations and endowments accounted for only a small portion of voluntary hospitals' income.[80] Nonetheless, surveys focused on capital rather than revenue sources in order to insist that hospital planning remain in the private sector.[81]

Reformers referred to capital invested in nonprofit institutions as "social capital," yet it was financiers and their accounting firms that formulated the rules for its use. The *New York Times* had alluded to the rule that capital donations had to be invested in buildings and technology that could continue to expand and increase the value of the capital.[82] This meant that current operations had to generate sufficient revenues to cover expenses, including interest on debt. Maximizing the productivity

of costly specialties and their technologies was another rule. CCMC's Rufus Rorem advised the Taylor Society for the Advancement of Management that efficient use of fixed capital required maximum use of hospital plant and technology.[83] Voluntary hospitals further tied themselves to the profit-making economy by investing a considerable portion of their capital in its markets (e.g., 51% of Boston's voluntary hospital assets were invested in this manner).[84]

Yet it was not all business; commerce and idealism have long coexisted in health policy history.[85] Reformers earnestly believed that maximizing their institutions' economic good was consistent with maximizing the public good. Haven Emerson endorsed business practices as necessary for institutional efficiency, and he assumed that this efficiency was consistent with the philosophy of service that he often expressed in his speeches.[86]

It is difficult to measure the extent to which surveys actually shaped hospital development, and of course it is impossible to do so from a study of the surveys themselves. The surveys formed a part of the many social, economic, and medical factors that shaped hospital growth. It is reasonable to expect that, like the Cleveland Hospital Council, agencies that commissioned surveys to help them decide which hospital building projects to fund or endorse did use them for that purpose. A CCMC report further concluded that community chests and their surveys exerted considerable power over local philanthropic and corporate donations to hospitals.[87]

The surveys also had a significant impact on future health reforms, contributing directly to the establishment of hospital councils in many cities. The extent to which these councils implemented survey recommendations remains a question for further research. Nonetheless, the surveys' and the councils' private health planning strategies left an important legacy for postwar government-sponsored health planning programs.[88] The surveys identified real problems in hospital growth, and their strategy of consolidating institutions and power mirrored monopolizing activities in industry, becoming a principal health planning strategy.

HEALTH PLANNING AND THE MARKET

The American Hospital Association played a lead role in the 1946 Hill–Burton hospital construction legislation (Pub L No. 79-725), and its Commission on Hospital Care added a survey requirement to encourage regional organization.[89] In practice, however, the program's grants, loan guarantees, and interest subsidies favored the spread of small local hospitals (not to mention their expected benefits for local business). The federal government tried again to organize hospitals in the 1960s, when it attempted to control the growth it was paying for in the Medicare and Medicaid programs.

In reimbursing operational (and some capital) expenses of treating elderly and low-income people, Medicare and Medicaid shifted considerable financial risk to government without changing hospital ownership or management structures. This risk shift further imposed bankers' roles and rules, augmenting banks' incentives to do business with the nonprofit sector and expanding hospitals' indebtedness to private capital for growth.[90] By 1969, credit financed 35% of hospital capital expenditures (as compared with governments' 26%, hospital revenues' 20%, and philanthropy's 15%).[91] Creditors required hospitals to draw up capital budgets, further standardize accounting procedures,[92] and, in general, "operate in a businesslike fashion."[93]

In addition to the city-based surveys and the regional surveys required by the Hill–Burton program, health planning signified a third major 20th-century policy attempt to shape hospitals and hospital systems. The 1966 Comprehensive Health Planning program; its replacement, the 1974 National Health Planning and Resources Development Act (Pub L No. 93-641); and additional legislation adopted many of the capital-oriented strategies of the hospital surveys. Certificate of Need (CoN), which surveys proposed initially as a voluntary measure, was established in New York State in 1964 as a publicly sponsored review of hospital capital expenditures. Expanding the review to include costly specialty services, the New York Governor's Committee on Hospital Costs explained its purpose in terms of reducing "idle capital."[94] Subsequently, in 1972, Congress extended Certificate of Need programs to all states, instructing that federal funding should not be used to support "unnecessary capital expenditures."[95]

The 2 national health planning programs based their actions on both economic planning that sought to rationalize production systems and social planning that sought a more equitable distribution of their products.[96] They affirmed primary care and disease prevention as major planning priorities, but the Certificate of Need, planning's only actual regulatory

mechanism, was (and is) limited to hospitals in most states. At best, planning could only pay lip service to supporting innovative primary care approaches such as community health centers.[97]

Economist Kenneth Arrow's 1963 article strongly influenced thought on planning and the Certificate of Need.[98] In enumerating conditions that lead to medical organizations' "failure" to conform to market theory, Arrow's article can be read as supporting regulation. But at the same time, it legitimized measuring health care against the economic norms of the competitive model.[99] The burgeoning health service research fields of health economics, systems research, and organizational theory consciously integrated business planning methods into health planning.[100]

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The more than 200 area agencies and regional advisory centers in the federally funded health planning network strove to adjust hospital markets. Local agencies surveyed service supply and applied formulas (many of which were derived from industrial planning) designed to adjust supply to effective demand as defined by actual use. They did summarize epidemiological data about their areas, but the required methods did not and could not incorporate this information into projections of resource needs.[101] Economic expectations of efficiencies of scale with maximal use of fixed capital drove health planning more than did epidemiology. On the basis of the interests of medical specialty associations as well as economic assumptions, federal health planning guidelines established minimum volume and use criteria that favored consolidation of hospitals and specialty services.[102]

A good case can be made, both socially and economically, that there has been and is a surplus of high-cost specialty services. A benefit of consolidation is higher efficiency in the use of the particular technologies and procedures that demonstrate economies of scale (many do not). The other side of the coin, however, is that consolidation reconstructs health care as an industry comprising high-cost institutions irrespective of population need.

The National Bureau of Health Facilities and its regional advisory centers further contracted with accounting and management consulting firms to train health planners in financial formulas and rules for preserving capital.[103] "No investment decision should explicitly consider social good in the absence of attendant cash flows to the institution," one planning advisor pointedly counseled.[104]

In addition to reinforcing an economic approach to health planning, Arrow's article fueled researchers' and policymakers' attempts to construct the postulated missing markets.[105] In so doing, they ignored government subsidies, risk protection, entry restriction, and many other regulations that nullified a classical market.[106] Free-market rhetoric combined with this regulation further enhanced the power of dominant institutions. The health planning sector partially accommodated to the growing supply-side view, and its health systems agencies participated in building the business–health care coalitions that would come to replace them.

Business, for its part, appreciated the extent to which capital investment rules shaped health system infrastructure.[107] After the market movement (and its movers) terminated national health planning in 1986—with Certificate of Need programs continuing in some states—commercial sources of capital became even more directly involved in reconfiguring the health care system. Further promulgating financial rules (in the name of the market), they forced the same kinds of mergers and reorganizations resisted under government planning and regulation.[108] In addition, ongoing efforts within and outside of medicine have attempted to complete a "conversion" of medicine from a nonprofit to an investor-owned, for-profit industry. Many of their tactics entail the strategic use of capital. A National Bureau of Economic Research report, for example, raised concern about capital "trapped" in nonprofit hospitals.[109]

There is no doubt that there has been a huge attitudinal and rhetorical shift in health reform over the past few decades from social to economic and from health to cost control. Less constrained by planning's ethic and rhetoric of social justice, market theorists straightforwardly repudiated any process for matching services to illness by asserting that "marketing replaces needs assessment and epidemiology."[110] Despite their differences, however, both planning and market regimes expanded high-cost elite institutions that dominated markets.[111] Moreover, both promoted business models and capital rules.

CONCLUSIONS

Long-standing tensions remain between economic and social goals and between market and regulatory means in health reform. Although concerned with the health of the public, reformers involved in hospital surveys and health planning nourished the development of capital-intensive specialty facilities and starved primary and chronic care. Reducing the high costs of medical care requires altering the structure of high-cost medical care. Meeting public health needs requires not just equitable access to existing services, as crucial as that reform is, but designing alternative forms of health care delivery. A bonus is that many potential alternatives may be less costly.

Social medicine still poses a pair of important but extremely difficult challenges to social and health reform. The first takes on the social and economic roots of illness. Past failures to change unhealthy social and economic conditions and build services that match needs may indicate an inability or unwillingness of progressive reformers to question the work and identity of the business, medical, and academic institutions in which they are embedded. Social medicine's disparity between goals and means may also mean that the task is literally inconceivable in prevailing economic climates.

The second challenge—still daunting but somewhat less threatening and potentially a major step forward—is to develop admittedly bureaucratic planning methods in which available scientific evidence is used to match the nature and quantity of health care services to population illness. Because most illnesses do not require or benefit from complex care, such an epidemiological approach also would seriously challenge existing institutions and organizational models.

Just as the depression of the 1930s reinforced social medicine ideas,[112] the inflated growth of recent decades and the capital crisis it engendered may offer a rare opportunity to question economic and medical orthodoxies usually taken for granted. It is simplistic to declare that planning is the problem and that everything will automatically be solved by a shift to the market. It is similarly simplistic to advise that privatization is the whole problem and that everything will automatically be solved by making private services public. The health policy sector needs to learn from past reforms that built high-cost medicine. It needs to design a social model of health care delivery and a way to substitute it for the current business model. ■

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Endnotes

1. Business Roundtable, *Health Care Costs in America: A Call to Action for Covering the Uninsured* (Washington, DC, 2007); Robert Wood Johnson Foundation, *High and Rising Health Care Costs: Demystifying U.S. Health Care Spending* (Princeton, NJ: Princeton University Press, 2008).

2. Medicare Payment Advisory Commission, *Report to the Congress: Improving Incentives in the Medicare Program* (Washington, DC, 2009), 53.

3. McKinsey Global Institute, *Accounting for the Cost of Health Care in the United States* (Washington, DC, 2007), 31.

4. "The High Cost of Health Care," *New York Times*, November 25, 2007: A25; "Financing Health Care Reform," *New York Times*, July 7, 2009: A22.

5. "The Problems of the Hospitals," *New York Times*, January 26, 1904: 8; "Financial Problems of the Hospitals," *New York Times*, January 3, 1904: 8; David Rosner, *A Once Charitable Enterprise: Hospitals and Health Care in Brooklyn and New York, 1885–1915* (Cambridge, England: Cambridge University Press, 1982), 42–59.

6. Joseph J. Weber, *Hospital Survey of a Community* (New York: State Charities Aid Association of New York, 1917).

7. Paul W. Glad, "Progressives and the Business Culture of the 1920s," *Journal of American History* 53 (1966): 75–89.

8. Brian Balogh, "Reorganizing the Organizational Synthesis: Federal-Professional Relations in Modern America," *Studies in American Political Development* 5 (1991): 119–172.

9. H.S. Person, "Scientific Management's Bigger Job," *Survey* 67 (1932): 579–581, 642–644.

10. William G. Scott, *Chester I. Barnard and the Guardians of the Managerial State* (Lawrence: University Press of Kansas, 1992), 5.

11. "When We Choose to Plan," *Survey* 67 (1932): 11; Jeffrey C. Isaac, *The Poverty of Progressivism: The Future of American Democracy in a Time of Liberal Decline* (Lanham, MD: Rowman and Littlefield, 2003), 58–65.

12. Allan G. Gruchy, "The Concept of National Planning in Institutional Economics," *Southern Economic Journal* 6 (1939): 121–144.

13. W.C. Mitchell, "The Social Sciences and National Planning," *Science* 81 (1935): 55–62; Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, MA: Harvard University Press, 1977), 1–12; Ellis W. Hawley, *The Great War and the Search for a Modern Order: A History of the American People and Their Institutions, 1917–1933* (New York: St. Martin's Press, 1979), 3–9, 52–55; Morton Keller, *Regulating a New Economy: Public Policy and Economic Change in America, 1900–1933* (Cambridge, MA: Harvard University Press, 1990); Patrick D. Reagan, *Designing a New America: The Origins of New Deal Planning, 1890–1943* (Amherst: University of Massachusetts Press, 1999), 20, 29, 64.

14. David W. Noble, *The Paradox of Progressive Thought* (Minneapolis: University of Minnesota, 1958), 133, 163–171; Daniel T. Rodgers, "In Search of Progressivism," *Reviews in American History* 10 (1982): 113–132; John M. Jordan, *Machine-Age Ideology: Social Engineering and American Liberalism, 1911–1939* (Chapel Hill: University of North Carolina Press, 1994); John Louis Recchiuti, *Civic Engagement: Social Science and Progressive-Era Reform in New York City* (Philadelphia: University of Pennsylvania Press, 2007), 34.

15. Guy Alchon, *The Invisible Hand of Planning: Capitalism, Social Science, and the State in the 1920s* (Princeton, NJ: Princeton University Press, 1985), 9.

16. Robert Wiebe, *The Search for Order: 1877–1920* (New York: Hill and Wang, 1967), 296; Samuel P. Hays, "Introduction: The New Organizational Society," in *Building the Organizational Society: Essays on Associational Activities in Modern America*, ed. Jerry Israel (New York: Free Press, 1972), 1–15.

17. Richard L. McCormick, "The Discovery That Business Corrupts Politics: A Reappraisal of the Origins of Progressivism," *American Historical Review* 86 (1981): 247–274; Maureen A. Flanagan, *America Reformed: Progressives and Progressivisms 1890s–1920s* (New York: Oxford University Press, 2007), 150.

18. Evan M. Melhado, "Health Planning in the United States and the Decline of Public-Interest Policymaking," *Milbank Quarterly* 84 (2006): 359–440.

19. George Rosen, *From Medical Police to Social Medicine* (New York: Science History Publications, 1974), 1–2.

20. Edward T. Morman, "George Rosen, Public Health, and History," in George Rosen, *A History of Public Health, Expanded Edition* (Baltimore: Johns Hopkins University Press, 1993), lxix–lxxviii.

21. George Rosen, *The Specialization of Medicine With Particular Reference to Ophthalmology* (New York: Froben Press, 1944), 31; Rosen, *From Medical Police to Social Medicine*, 298–299.

22. Elizabeth Fee, "Public Health, Past and Present: A Shared Social Vision," in Rosen, *A History of Public Health*, ix–lxvii.

23. Elizabeth Fee, "Henry E. Sigerist: From the Social Production of Disease

to Medical Management and Scientific Socialism," *Milbank Quarterly* 67, suppl. 1 (1989): 127–150.

24. Elizabeth Fee, "The Pleasures and Perils of Prophetic Advocacy: Socialized Medicine and the Politics of American Medical Reform," in *Making Medical History: The Life and Times of Henry E. Sigerist*, ed. Elizabeth Fee and Theodore M. Brown (Baltimore: Johns Hopkins University Press, 1997), 197–228.

25. Edgar Sydenstricker, "The Extent of Medical and Hospital Service in a Typical Small City," *Public Health Reports* 42 (1927): 121–131.

26. Richard V. Kasius, ed., *The Challenge of Facts: Selected Public Health Papers of Edgar Sydenstricker* (New York: Prodist, 1974), 76; Edgar Sydenstricker, *Health and Environment* (New York: McGraw-Hill, 1933), 127–129.

27. Noble, *The Paradox of Progressive Thought*, 185; Christopher Lasch, *The True and Only Heaven: Progress and Its Critics* (New York: W.W. Norton, 1991), 23; Isaac, *The Poverty of Progressivism*, 4–5; Robert Heilbroner, "Progress: An Economist's View," in *Making Progress: Essays in Progress and Public Policy*, ed. C. Leigh Anderson and Janet W. Looney (Lanham, MD: Lexington Books, 2007), 319–327. The concept of capital itself builds in economic growth by generation of more capital. The *Oxford English Dictionary* defined capital (in 1630) as "accumulated wealth reproductively employed." Thomas K. McCraw, "Introduction," in *Creating Modern Capitalism* (Cambridge, MA: Harvard University Press, 1995), 1–16.

28. S.E. Berki, "Review of *Economists and Health Care: From Reform to Relativism*," *Medical Care* 18 (1980): 878–879.

29. Haven Emerson, "The Hospital Survey and Construction Act and a Nation-Wide Health Program," in *Selected Papers of Haven Emerson* (Battle Creek, MI: W.K. Kellogg Foundation, 1949), 418–442.

30. Jon A. Peterson, "The Impact of Sanitary Reform Upon American Urban Planning, 1840–1890," *Journal of Social History* 13 (1979): 83–103.

31. Cleveland Hospital Council, *Cleveland Hospital and Health Survey, Part Eleven: Bibliography of Surveys* (Cleveland, OH, 1920).

32. Steven C. Wheatley, *The Politics of Philanthropy* (Madison: University of Wisconsin Press, 1988), xii, 48, 53.

33. Peter Buck, "A Healthy Regard for the Facts," in *Science, History and Social Activism: A Tribute to Everett Mendelsohn*, ed. Garland Allen and Roy M. MacLeod (Dordrecht, the Netherlands: Kluwer Academic Publishers, 2001), 137–151.

34. Berki, "Review," 878–879.

35. Philadelphia County Medical Society Committee on Hospital Efficiency, "Reports Submitted to the Philadelphia County Medical Society by the Committee on Hospital Efficiency 1913," in *Efficiency, Scientific Management, and Hospital Standardization: An Anthology of Sources*, ed. Edward T. Morman (New York: Garland Publishing, 1989), 207–217.

36. Michael M. Davis and Haven Emerson, "How Should Community Hospital Surveys Be Conducted?" *Modern Hospital* 26 (1926): 17–19.

37. "Haven Emerson, 1874–1957," *American Journal of Public Health* 47 (1957): 1009–1011.

38. Haven Emerson, "Public Health Diagnosis," in *Selected Papers of Haven Emerson* (Battle Creek, MI: W.|K. Kellogg Foundation, 1949), 221–247.

39. Cleveland Hospital Council, *Cleveland Hospital and Health Survey, Hospitals and Dispensaries, Part Ten* (Cleveland, OH, 1920), 817–992; Cleveland Hospital Council, *Cleveland Hospital and Health Survey: Method of Survey, Part Eleven* (Cleveland, OH, 1920), 1003–1037.

40. Cleveland Hospital Council, *Cleveland Hospital and Health Survey: Two Years After* (Cleveland, OH, 1922), 6, 10, 64; Cleveland Hospital Council, *Education and Practice in Medicine, Dentistry, Pharmacy, Part Eight* (Cleveland, OH, 1920), 651–698.

41. E.H. Lewinski-Corwin, *The Hospital Situation in Greater New York* (New York: G.P. Putnam's Sons, 1924), v.

42. New York Academy of Medicine, "Society Report, Meeting Dec 1, 1921," *Medical Record* 100 (1921): 1136–1139; William Shonick, *Elements of Planning for Area-Wide Personal Health Services* (St. Louis: C.V. Mosby, 1976), 23–24.

43. Committee on Administrative Practice, American Public Health Association, *A Study of the Health Activities of St Louis, Missouri* (St. Louis: Community Council of St. Louis, 1927), 13, 60, 79, 83–84.

44. Alan Derickson, *Health Security for All: Dreams of Universal Health Care in America* (Baltimore: Johns Hopkins University Press, 2005), 47.

45. Barbara Bridgman Perkins, "Economic Organization of Medicine and the Committee on the Costs of Medical Care," *American Journal of Public Health* 88 (1998): 1721–1726.

46. Michael M. Davis and C. Rufus Rorem, *The Crisis in Hospital Finance and Other Studies in Hospital Economics* (Chicago: University of Chicago Press, 1932), 5.

47. R.J. Lee and L.W. Jones, *The Fundamentals of Good Medical Care* (Chicago: University of Chicago Press, 1933); Daniel M. Fox, *Health Policies, Health Politics* (Princeton, NJ: Princeton University Press, 1986), 78–79.

48. Michael M. Davis, "Wanted: Research in the Economic and Social Aspects of Medicine," *Milbank Memorial Fund Quarterly* 13 (1935): 339–346.

49. George Rosen, "Approaches to a Concept of Social Medicine: A Historical Survey," in *Backgrounds of Social Medicine* (New York: Milbank Memorial Fund, 1949), 9–23.

50. Alexander Ropchan, "Chicago Hospital and Clinic Survey—1934," *Bulletin of the American Hospital Association* 9 (1935): 34–49.

51. Haven Emerson and Anna C. Phillips, *Report of a Study of the Organized Care of the Sick, and of Health Agencies of Boston* (Boston: Citizen's Committee of the Emergency Campaign of 1934, Boston Council of Social Agencies, and Hospital Superintendent's Club, 1934) (typed copy with typed and hand corrections).

52. United Hospital Fund, *Hospital Survey for New York, Vol. II* (New York, 1937), 36.

53. Hospital Survey for New York, "Memorandum on the Survey Development Program," June 4, 1937, Papers of the Health and Hospital Planning Council of Southern New York (1938–1976), Rare Book Room, New York Academy of Medicine.

54. Hospital Survey for New York, "Future Organization of General Agencies for the Organized Care of the Sick in the New York Metropolitan Area," no date; Papers of the Health and Hospital Planning Council of Southern New York (1938–1976), Rare Book Room, New York Academy of Medicine.

55. Hospital Survey for New York, "Tentative Outline of Questions to Be Answered in Economic Report," January 10, 1936, Papers of the Health and Hospital Planning Council of Southern New York (1938–1976), Rare Book Room, New York Academy of Medicine.

56. United Hospital Fund, *Hospital Survey for New York, Vol. I* (New York, 1938), 239.

57. United Hospital Fund, *Hospital Survey for New York, Vol. III* (New York, 1938), 96.

58. United Hospital Fund, *Hospital Survey for New York, Vol. I*, 41.

59. United Hospital Fund, *Hospital Survey for New York, Vol. II*, ix.

60. United Hospital Fund, *Hospital Survey for New York, Vol. II*, ix, 345.

61. United Hospital Fund, *Hospital Survey for New York, Vol. III*, 97.

62. United Hospital Fund, *Hospital Survey for New York, Vol. I*, 248.

63. United Hospital Fund, *Hospital Survey for New York, Vol. III*, 97.

64. Haven Emerson, "Governmental Planning for Health," *Journal of the Medical Society of New Jersey* 36 (1939): 428–434; Haven Emerson, "The Question of Socialized Medicine," *New York State Journal of Medicine* 41 (1941): 698–703.

65. United Hospital Fund. *Hospital Survey for New York, Vol. III*, 159; Ellis W. Hawley, *The New Deal and the Problem of Monopoly: A Study in Economic Ambivalence* (Princeton, NJ: Princeton University Press, 1966), 13, 173, 176.

66. United Hospital Fund, *Hospital Survey for New York, Vol. II*, 38.

67. United Hospital Fund, *Addresses on the Hospital Survey for New York* (New York, 1937).

68. "Introduction to the Health and Hospital Planning Council of Southern New York (1938–1976)," Papers of the Health and Hospital Planning Council of Southern New York (1938–1976), Rare Book Room, New York Academy of Medicine.

69. Haven Emerson and Anna C. Phillips, *Hospitals and Health Agencies of San Francisco, 1923* (San Francisco: Committee on Hospitals and Health Agencies of the Council of Social and Health Agencies of San Francisco, 1923), 30, 67, 134.

70. Haven Emerson and Anna C. Phillips, *Health and Hospital Survey of Bethlehem, Pennsylvania 1925* (Bethlehem, PA: City of Bethlehem, Lehigh University, Trustees of St. Luke's Hospital, Bethlehem Steel Company, and Community Chest of Bethlehem, 1925); Thomas C. Cochran and William Miller, *The Age of Enterprise: A Social History of Industrial America* (New York: Harper & Row, 1961), 305–306.

71. Mary L. Hicks, *Hospitals of Cincinnati: A Survey* (Cincinnati, OH: Helen S. Troustine Foundation, 1925), 33, 44.

72. Joseph Chapman Doane, *The Report of the Newark Hospital Survey* (Newark, NJ: Welfare Federation of Newark, 1929), 12–16.

73. Committee on Administrative Practice, American Public Health Association, and Kansas City Public Service Institute, *Health and Hospital Survey: Kansas City, Missouri* (Kansas City,

MO: Chamber of Commerce Committee on Public Health and Welfare, 1931).

74. C. Rufus Rorem, *A Survey of Hospital Services and Finances in the Philadelphia Area* (Philadelphia: Hospital Council of Philadelphia, 1938).

75. Daniel M. Fox, *Economists and Health Care: From Reform to Relativism* (New York: Prodist, 1979); Arnold S. Relman, "The New Medical Industrial Complex," *New England Journal of Medicine* 303 (1980): 963–970; Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1982); Melhado, "Health Planning"; Carl F. Ameringer, *The Health Care Revolution: From Medical Monopoly to Market Competition* (Berkeley: University of California Press, 2008).

76. Rosemary Stevens, *The Public-Private Health Care State: Essays on the History of American Health Care Policy* (New Brunswick, NJ: Transaction Publishers, 2007), 313.

77. Cleveland Hospital Council, *Cleveland Hospital and Health Survey: Method of Survey, Part Eleven.*

78. United Hospital Fund, *Hospital Survey for New York, Vol. III*, 518, 521.

79. Herbert E. Klarman, "Planning for Facilities," in Eli Ginzburg (*sic*), *Regionalization and Health Policy* (Washington, DC: US Department of Health, Education, and Welfare, 1977), 25–36.

80. Pierce Williams and Frederick E. Croxton, *Corporation Contributions to Organized Community Welfare Services* (New York: National Bureau of Economic Research, 1930), 212, 221–222; I. S. Falk, C. Rufus Rorem, and Martha D. Ring, *The Costs of Medical Care: A Summary of Investigations on the Economic Aspects of the Prevention and Care of Illness* (Chicago: University of Chicago Press, 1933), 331; United Hospital Fund, *Hospital Survey for New York, Vol. II*, 38.

81. Emerson and Phillips, *Report of a Study.*

82. Howard S. Cullman, "Application of Business Principles in Hospital Administration," *Bulletin of the American College of Surgeons* 15 (1931): 44–48.

83. C. Rufus Rorem, "Some Economic Issues in Hospital Management," *Bulletin of the Taylor Society for the Advancement of Management,* February 1932, cited in C. Rufus Rorem, *A Quest for Certainty: Essays on Health Care Economics 1930–1970* (Ann Arbor, MI: Health Administration Press, 1982), 19–27.

84. Emerson and Phillips, *Report of a Study.*

85. Stevens, *The Public-Private Health Care State*, ix.

86. Haven Emerson, "The Health Foundation for Recovery," *California and Western Medicine* 42 (1934): 259–262.

87. Howard W. Green, *Miscellaneous Contributions on the Costs of Medical Care, Number 12, Health Councils* (Washington, DC: Committee on the Costs of Medical Care, 1932).

88. Eleanor D. Kinney, "Legislative History," in Bonnie Lefkowitz, *Health Planning: Lessons for the Future* (Rockville, MD: Aspen Systems Corporation, 1983), 7–29.

89. Commission on Hospital Care, *Hospital Care in the United States* (New York: Commonwealth Fund, 1947), 110, 220–221, 226; Carol McCarthy, "Planning for Health Care," in *Health Care Delivery in the United States*, ed. Steven Jonas and Anthony R. Kovner (New York: Springer Publishing Company, 1977), 346–373.

90. Rosemary Stevens, *In Sickness and in Wealth: American Hospitals in the Twentieth Century* (New York: Basic Books, 1989), 293.

91. Judith R. Lave and Lester B. Lave, *The Hospital Construction Act: An Evaluation of the Hill-Burton Program, 1948–1973* (Washington, DC: American Enterprise Institute for Public Policy Research, 1974), 50.

92. Melhado, "Health Planning."

93. Lave and Lave, *The Hospital Construction Act.*

94. Governor's Committee on Hospital Costs, *Report of the Governor's Committee on Hospital Costs* (New York, 1965).

95. Urban Systems Research and Engineering and Policy Analysis Inc., *Certificate of Need Programs: A Review, Analysis, and Annotated Bibliography of the Research Literature* (Washington, DC: US Department of Health, Education, and Welfare, 1978).

96. Herbert J. Gans, *People, Plans, and Policies* (New York: Columbia University Press, 1991), 141.

97. Bonnie Lefkowitz, *Community Health Centers: A Movement and the People Who Made It Happen* (New Brunswick, NJ: Rutgers University Press, 2007).

98. Kenneth J. Arrow, "Uncertainty and the Welfare Economics of Medical Care," *American Economic Review* 53 (1963): 941–973.

99. Mark V. Pauly, "Foreword," in *Uncertain Times: Kenneth Arrow and the Changing Economics of Health Care*, ed. Peter J. Hammer, Deborah Haas-Wilson, and William M. Sage (Durham, NC: Duke University Press, 2003), vii–xii.

100. Paul C. Nutt, *Planning Methods for Health and Related Organizations* (New York: John Wiley & Sons, 1984).

101. Barbara Bridgman Perkins, *The Medical Delivery Business: Health Reform, Childbirth, and the Economic Order* (New Brunswick, NJ: Rutgers University Press, 2004), 91.

102. U.S. Department of Health, Education, and Welfare, *National Guidelines for Health Planning* (Washington, DC: U.S. Government Printing Office, 1978).

103. Larry Y. Wilson, *Financial Impairment in the Health Care Industry—Implications for Health Planning* (San Francisco: Western Center for Health Planning and Booz, Allen & Hamilton Inc., 1980); Thomas M. Tierney and Leonard F. Krystynak, *Capital Analysis and Priority Setting: Capital Formation Concerns in the Health Sector* (San Francisco: Western Center for Health Planning, 1981). Disclosure: I was one of the health planners they tried to train.

104. Hugh W. Long, "Investment Decision Making in the Health Care Industry: The Future," *Health Services Research* 14 (1979): 183.

105. Uwe E. Reinhardt, "Can Efficiency in Health Care Be Left to the Market?" in *Uncertain Times*, ed. Hammer et al., 111–133.

106. Milton Friedman and other members of the Chicago School were exceptions.

107. Jonathan Betz Brown, "Employers Face High Stakes in Forging Capital Policy," *Business and Health*, June 1986: 7–10.

108. J.B. Silvers, "The Role of the Capital Markets in Restructuring Health Care, in *Uncertain Times*, ed. Hammer et al., 156–166.

109. Henry Hansmann, Daniel Kessler, and Mark McClellan, *Ownership Form and Trapped Capital in the Hospital Industry* (Cambridge, MA: National Bureau of Economic Research, 2002).

110. Stephen S. Mick, "Themes, Issues, and Research Avenues," in *Innovations in Health Care Delivery: Insights for Organization Theory* (San Francisco: Jossey-Bass, 1990), 1–19.

111. Barbara Bridgman Perkins, "Re-Forming Medical Delivery Systems: Economic Organization and Dynamics of Regional Planning and Managed Competition," *Social Science and Medicine* 48 (1999): 241–251; Stevens, *The Public-Private Health Care State*, 178.

112. Dorothy Porter, "How Did Social Medicine Evolve, and Where Is It Heading?" *PLoS Medicine* 3 (2006): 1667–1672.