

## Chapter 6

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### Theorizing Legitimacy or Legitimizing Theory?

NEOLIBERAL DISCOURSE AND HMO POLICY, 1970–1989

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SINCE THE 1970s, public policy in the United States and other wealthy democracies has moved in a neoliberal direction, and we have seen the increasing application of market solutions to public problems. Privatization and the deregulation of natural monopolies are only the more extreme forms of this movement. Equally telling are efforts to reorganize social welfare, education, and health care along the lines of the private sector, with great emphasis on individual choice by consumers and market competition among suppliers.

This chapter examines one moment in this public policy shift: the emergence and spread of institutional support for health maintenance organizations (HMOs) in American health care. Federal and state HMO policy marks an important effort to insert market principles into a sector traditionally organized around professional authority. Analysis of this policy shift contributes to an understanding of the more general rise of neoliberalism.

The theoretical goal is to explore how institutional arguments about organizational legitimacy can be used to explain public policy. We contrast three lines of argument: an *ecological institutionalism* focusing on the size of the organizational population; a *structural institutionalism* focusing on alliances with other key players within the organizational field; and a *discursive institutionalism* focusing on how an organizational form is constituted and interpreted within public discourse. Arguments are considered qualitatively in an account of federal legislation, and quantitatively in an analysis of the timing and content of HMO legislation across the American states.

We distinguish two stages in the development of HMO policy. The first stage involves the formulation and passage of federal HMO legislation, and here we argue that discursive processes were absolutely central. Without appreciating the transformative power of neoliberal discourse, it is difficult to understand how a small, embattled organizational population could have garnered public support. But once HMOs had gained the public stage, the policy-making process became more complex. The diffusion and modification of HMO policy was shaped by institutional pressures for homogenization, by the interests of powerful actors in the health industry, and by HMOs themselves.

### Three Lines of Institutional Argument

While we are accustomed to think of different versions of institutionalism as employing different logics and modes of inquiry (elaborated in this volume), related oppositions appear within the empirical field of organizational studies. Many types of institutional argument have entered organizational research, from Selznick's notions of adaptive systems to Meyer's notions of rationalized environments (for reviews, see Scott 1987; DiMaggio and Powell 1990; Strang 1994; Scott 1995). This chapter examines *ecological*, *structural*, and *discursive* lines of institutional argument. These three approaches provide distinct insights into the roots of organizational legitimacy, insights that are transposed here to formulate alternative predictions about how an organizational form gains legislative support.

#### *Ecological Institutionalism*

Ecological versions of institutionalism focus attention on the size and resources of the organizational population targeted by public policy. Hannan and Freeman's (1987) notion of density dependent legitimation poses this idea in a particularly clear way. As organizational populations grow, they become "taken for granted" (see Berger and Luckmann 1966; Meyer and Scott 1983). Taken-for-grantedness is both a diffuse orientation and a basis for concrete support. Hannan and Freeman (1987, p. 28) thus suggest that low density "presumably makes it difficult to convince key actors, such as banks and government agencies, to transfer material and symbolic resources to the organizations in the population."

Hannan and Freeman employ a cognitive logic, where simple prevalence leads an organizational form to be seen as natural. Others describe different mechanisms but assert the same conclusion. For example, Torres (1988) points to the way organizations push for public policies that serve their interests. Larger populations with more resources should be able to do so more forcefully. Tendencies toward the capture of regulatory bodies by the regulated (Stigler 1971) lead to the development of very similar ideas.

#### *Structural Institutionalism*

Structural versions of institutionalism point to relations of power and cooperation within "organizational fields," communities of exchange partners and competitors making up a recognized sector. DiMaggio and Powell's (1983) seminal discussion focuses attention on the way interaction within fields generates isomorphism. But we can also consider how interorganizational rivalry, exchange, and alliance condition state policy. Institutional support may de-

pend on how organizations are situated within larger fields, particularly when the organizations at issue are small and the field is large.

To develop an argument along these lines, we need an analysis of the relevant structure of the health sector. Most revealing is the historical opposition of the medical profession to HMOs and other forms of "managed care." Prior to the 1970s, most physicians shunned HMOs, ostracized their fellows in pre-paid practice, and sponsored legal restrictions that safeguarded the fee-for-service practice of the solo practitioner.

Much work argues that the "professional sovereignty" of the physician began to collapse under the enormous fiscal expansion of the health sector produced by Medicare and Medicaid. Imershein, Rond, and Mathis (1992) find that policies promoting negotiated competition (like HMO laws) emerge when health care purchasers mobilize and health providers fragment. Unified purchasers of care press for the opportunity to bargain with economizing providers, and disorganized health providers are unable to resist the pressure.

New actors may also disrupt the policy equilibrium to aid pariah organizational forms like HMOs. One example of this sort of analysis is the claim by many that the mobilization of business coalitions promoted neoliberal public health policy (Berghold 1987; Imershein, Rond, and Mathis 1992). Long the silent partner in health care, corporate America felt the pinch of rising medical expenditures from the mid-1960s on. Linda Berghold (1984) argues that the business-led Roberti Coalition engineered California's market oriented health reforms in 1982. In other states business coalitions advocated a variety of cost containment strategies that included managed care systems and HMOs (Berghold 1987; McLaughlin, Zellers, and Brown 1989).

#### *Discursive Institutionalism*

Discursive versions of institutionalism develop a cultural analysis of the meanings attached to particular organizational arrangements (Meyer and Rowan 1977; Fligstein 1990; Dobbin 1994). Here, institutional support emerges not when organizations are powerful or well connected, but when they embody models of appropriate and effective action that make sense within larger systems of discourse.

The policy debate in American health care has traditionally revolved around a confrontation between "professional" and "bureaucratic" organizing principles. Since the turn of the last century, health care had been organized around professional authority (Freidson 1970; Starr 1982), with control in the hands of physicians socialized to technical mastery and a commitment to service. State policies conceived within this framework sought to reinforce professional standards and provide resources to physicians and hospitals.

The traditional alternative to professional control was the "bureaucratic"

model, where health experts coordinated health care delivery to maximize access and equity. Under the aegis of an expanding welfare state, bureaucratic reforms were proposed at the national level in the 1920s, 1930s, 1940s, 1960s, 1970s, and 1990s without success (Starr 1982). Historically, HMOs (qua group prepaid practice) can be located within one wing of this movement, eschewing physician autonomy in favor of cooperation among doctors and between doctors and communities.

In the 1970s, however, a neoliberal or "market" model was gaining legitimacy in American health care discourse. Of course, this model may be understood as the taken-for-granted core of American approaches to political economy (Campbell and Lindberg 1990; Dobbin 1994). But market-liberal approaches were new to the field of health care, and generally resurgent in American policy circles. Under a market model, health entrepreneurs would integrate or spin off services to maximize productive efficiencies, and gain relatively unrestricted access to capital and labor markets. Competition for the consumer's health dollar would discipline entrepreneurs and ensure the provision of a better product at a lower price.

A discursive institutionalism notes the benefits accruing to organizational forms that could be linked to a neoliberal policy analysis. As described below, HMOs (along with other organizational forms, like for-profit hospitals) found themselves in just this position.

### Federal HMO Policy

Federal support for HMOs began in the Department of Health, Education, and Welfare (Falkson 1980; Brown 1983). In February 1970, Dr. Paul Ellwood of the American Rehabilitation Foundation met with senior officials at HEW. He argued that mounting health care costs were the product of misaligned incentives in health care. Fee-for-service medicine gave the physician a financial incentive to engage in expensive, crisis-driven forms of care, and a relatively free hand to do so. The insurer footing the bill had the clearest incentive to economize on health care, but was poorly placed to manage the doctor-patient relationship.<sup>1</sup>

Ellwood argued that an organization that simultaneously insures and delivers health care would reconnect incentives and capacities. Such an organization would possess both the motive and the opportunity to find ways of economizing on health care. Efforts to build these sorts of plans in the past, the argument continued, had been crippled by the physicians jealous of their professional prerogatives. Elimination of political barriers should thus spark rapid organizational expansion. Ellwood christened such plans "health maintenance organizations" to emphasize the preventative strategy they might rationally embrace.<sup>2</sup>

The newly christened "HMO" was not made entirely out of whole cloth. HMO prototypes (as they came to be anachronistically called) could be recognized in community based groups such as the Elk City Cooperative and Group Health Cooperative, in corporate plans like Kaiser Permanente, in now extinct "union plans," and in physician alliances like the San Joaquin Medical Care Foundation. All of these forms of prepaid practice fit Ellwood's minimal definition of an integrated insurer and provider. And the good reputation enjoyed by the most successful of these "prototypes" (Kaiser, GHC, Group Health Association) added to the plausibility of Ellwood's argument.

All kinds of choice-theoretic arguments suggest, of course, that the health crisis felt by state regulators in the 1970s would produce proposals for reform. But a content-free model does not help explain why policy makers would promote health maintenance organizations and not some other reform strategy. Further, a model of adaptive search (Levinthal and March 1981) suggests that federal policy makers should have sought to replicate the highly successful Kaiser model across the country. Rather than basing policy on the specific organizational strategies adopted by successful prepaid plans in the past, health analysts and legislators constructed a new and highly generalized conception of prepaid practice that resonated with core cultural understandings about incentives, organizations, and markets. HMOs were theorized (Strang and Meyer 1993), not found.

The efficiency analysis advanced by Ellwood differed dramatically from the traditional case for prepaid practice, which revolved around consumer rights and the rationalization of medical care (MacColl 1966). Patient participation, cooperation among physicians, and elaborated quality control were seen as the great advantages of these groups—not cost savings. And prepaid practices did not view themselves as sharing a core identity until the federal government enacted one into law. Corporate and community plans had little in common. In fact, the HMO concept combines historical enemies: group plans like Kaiser and the medical care foundations that solo practitioners formed to keep the plans out of town (Starr 1982, pp. 324–25; Strang and Uden-Holman forthcoming).

The "HMO concept" jibed with the policy concerns and commitments of the Nixon administration. Health maintenance organizations provided a proactive response to the need to contain costs in the increasingly state funded health sector. They were attractive as an alternative to national health care reform proposed by Senator Ted Kennedy and others. And an HMO experiment was consistent with the larger policy repertoire of the American state, which works through the redefinition of property rights and the chartering of market competitors (Campbell and Lindberg 1990) much more than through explicit controls. In March 1970, Richard Nixon placed health maintenance organizations at the core of his health policy initiative.

In Congress, the analysis forwarded by Paul Ellwood resonated with the

commonsense reasoning of legislators and the disciplinary training of health analysts. Like Ellwood, legislators and health policy experts presumed that individual self-interest drives most behavior, that markets discipline organizational outcomes, and that structural hurdles are easily overcome. Brown's (1983) detailed account of the legislative process points to the repeated and effortless deployment of these arguments throughout congressional deliberations.

An HMO act also received support from longtime health reformers like Ted Kennedy and William Roy. These lawmakers had motives in direct opposition to Nixon and HEW — they wanted HMOs to provide a first step toward a national health plan rather than to substitute markets for professional controls. To do so, they accepted the HMO vehicle but pushed for a law that would underwrite new startups in medically underserved inner cities and rural areas.

Existing prepaid practices were interested but lukewarm supporters of legislation. Kennedy's ideas worried Kaiser Permanente and other large, successful plans, who feared that federal support would lead to their ghettoization. And in any case, the nation's roughly one hundred prepaid practices boasted fewer than 3 million enrollees in the early 1970s, so their voices did not carry far.

Perhaps the most striking support for HMOs came from a wide variety of established players: commercial insurers, Blue Cross and Blue Shield (BC/BS) plans, nonprofit hospitals, for-profit hospitals, and trade unions. Many of these groups were longtime opponents of prepaid practice. For example, Blue Cross and Blue Shield had been initially formed to ward off earlier efforts at circumscribing professional sovereignty. But now Walter McNeerney, president of the Blue Cross Association, testified before Congress: "You ask what is in it for us. I will make it real fast. We also live with seven of the largest 10 industries in this country, with management and labor, who want evidence that we are not just trading bugs, that we are interested in productivity and better delivery. That pressure is predominant" (U.S. House of Representatives 1972, p. 1014).

Influential players in health care were thus acutely sensitive to the Nixon administration's rationalizing discourse, viewed federal action as an opportunity rather than a threat, and positioned themselves as "potential HMO sponsors." In virtually lone dissent stood the American Medical Association, which argued that the federal government should conduct a modest experimental trial to investigate HMO performance.

One might think that so many advocates would generate a strong law. But multiple supporters with divergent agendas watered down the final product. Visions of the HMO as promoting market competition were inconsistent with visions of movement toward national health insurance. All kinds of existing and projected forms of prepaid practice campaigned to receive recognition as HMOs. Only the more extreme proposals were rejected, like the American Hospital Association's attempt to substitute publicly financed "health care centers" (i.e., hospitals) for HMOs.

The highly compromised federal HMO Act of 1973 was judged by many interested parties to be "unworkable" (McNeil and Schlenker 1975). It held out a number of attractions to HMOs that met federal standards, including a mandated dual choice provision that obliged employers to offer an HMO option if a plan operated in the area, a program of federal grants and loans, and the preemption of restrictive state laws. But to qualify under federal law, an HMO had to offer a rich benefits package, admit all consumers up to capacity during an open enrollment period, and apply uniform community rates rather than adjust premiums by prior medical history.

While federal monies and the prestige accorded by the 1973 act stimulated a small number of new ventures, established plans refrained from meeting federal standards. They pressed for revisions in the law instead, with substantial success (Falkson 1980, pp. 175–84; Brown 1983, pp. 346–57). Open enrollment was emasculated in 1976 and eliminated entirely in 1981; community rating was waived for many plans in 1976; and other requirements were progressively lightened. Over time, federal HMO policy became better aligned with the financial interests and conventional routines of the largest prepaid plans. One can thus usefully describe a policy dynamic of interest mobilization and even regulatory capture. But interest mobilization was triggered by federal law; it did not drive the law.

Elements of all three lines of institutional argument thus appear in the federal policy process. The legislative process was initiated and framed by a new interpretation of prepaid practice that made the HMO a poster child for market virtues. Neither existing prepaid practices nor their traditional enemies (now potential allies) were quick to mobilize or able to substantially define federal legislation. But over time, these groups awakened and gained the sort of law they desired.

### The Spread of State Legislation

Congress provided in many ways the crucial legislative arena for HMO politics, but its analysis did not discriminate between causal arguments in a clear way. We thus turn to state HMO acts that defined and regulated HMOs on an everyday basis. Examination of state laws allows us to more concretely identify conditions that promoted or retarded public policy, and to model the spread of support for HMOs over time and across space.

State HMO laws are enabling acts that specify what organizations can, cannot, and must do to incorporate as HMOs. Such legislation reduces uncertainty about which state regulations will be applied, and decreases the likelihood that inappropriate regulations will be imposed.<sup>3</sup> State HMO laws generally went further, eliminating existing legal barriers and ensuring a receptive regulatory climate. Earlier "Blue Shield" laws requiring that prepaid

plans be formed by physicians, controlled by physicians, or permit all interested physicians to participate were replaced with laws facilitating HMO access to employers and eliminating restrictions on physician employment.

State HMO legislation supported the nationwide growth of the HMO population. But as with federal policy, this support came at a price. Some enabling acts imposed structural or procedural requirements that threatened existing organizational routines. Such requirements served as a quid pro quo for public endorsement; in order to receive institutional support, organizations had to exhibit concern for the public good. State reforms were thus initially attacked for the benefit packages and marketing practices they mandated (see fears of legislatively induced "Cadillac HMOs" in McNeil and Schlenker 1975).

The symbolic effect of HMO enabling acts may have been more important than their regulatory impact. Public legislation reversed the stigma that had attached to prepaid practice since the 1920s, presenting HMOs as visionary and progressive. For example, the preamble to the New York HMO Act of 1975 read: "Encouraging the expansion of health care services options available to the citizens of the state is a matter of vital state concern. Without such an expansion, increased health insurance and other benefits will continue to escalate the costs of medical care and overload the health care delivery system. The health maintenance organization concept . . . represents a promising new alternative for the delivery of a full range of health care services at a reasonable cost."

The first state HMO acts were passed by Connecticut and Tennessee in 1971, two years before federal legislation but a year after Nixon's proposal for a national HMO initiative. Within two years of the 1973 federal law, almost half of the states had passed HMO acts. By 1989 only Alaska, Hawaii, Oregon, and Wisconsin lacked explicit enabling legislation for HMOs. Figure 6-1 lists the years when states first passed HMO laws.

We analyze the passage of state HMO laws within an event history framework, where the quantity of interest is the hazard of legal enactment (see Tuma and Hannan 1984 for an explication of event history modeling). Analyses of state legislation develop explanatory measures tied to each of the three institutional logics presented above, as well as consider models of the diffusion process itself. We examine measures first singly and then in combination. Appendix A gives descriptive statistics and sources for all indicators.

### *Ecological Arguments*

While ideas about population size and resources can be expressed in many ways, we follow the "density dependence" tradition of employing measures of organizational density and mass. Table 6-1 gives the impact of a variety of measures of state HMO density on the passage of legislation; all are examined as bi-

1971	Connecticut, Tennessee
1972	Florida, Pennsylvania
1973	Arizona, Colorado, Iowa, Minnesota, New Jersey, Nevada, Utah
1974	Idaho, Illinois, Kansas, Kentucky, Michigan, South Carolina, South Dakota
1975	Arkansas, California, Maryland, Maine, North Dakota, Oklahoma, Texas, Washington
1976	Massachusetts, New York, Ohio
1977	North Carolina, New Hampshire, West Virginia
1978	Nebraska
1979	Georgia, Indiana, Rhode Island
1980	Virginia, Vermont
1981	—
1982	Delaware
1983	Missouri
1984	New Mexico
1985	Wyoming
1986	Alabama, Louisiana, Mississippi
1987	Montana

Fig. 6-1. First Passage of State Enabling Laws for Health Maintenance Organizations (Aspen Systems Corp.)

variate relationships within a maximum likelihood framework (horizontal lines distinguish each analysis).<sup>4</sup> We measure whether any HMO operated within the state, the number of operating HMOs, quadratic functions of density, and logarithmic functions of density. (Of these, only quadratic and logarithmic functions can [over any finite range of empirical values] demonstrate a declining monotonic effect of the sort described in ecological accounts.) We also examine measures derived from HMO size: total HMO enrollment and HMO enrollment standardized by state population. Finally, we examine the number of federally qualified HMOs that could seek to override restrictive state laws.

Table 6-1 suggests that HMO density bears no direct relationship to the passage of HMO enabling acts. None of the measures of HMO density considered here has a statistically significant effect, and coefficients are small in magnitude. There is little evidence that state HMO laws are driven by a mounting sense that HMOs formed a natural part of the health delivery scene or that HMO laws were constructed to meet the needs of a growing HMO constituency.

The best example of this noneffect is provided by California, since World War II the home of the largest HMOs in the country. But no state legislation was enacted until after the federal government sponsored HMOs in the early

**TABLE 6-1**  
Organizational Ecology and Density Dependent Legislation

	<i>Estimate</i>	<i>S.E.</i>
Any HMOs	.492	.306
-----		
HMOs	.018	.016
-----		
HMOs	-.005	.046
HMOs <sup>2</sup>	.000	.001
-----		
Federally qualified HMOs	-.038	.116
-----		
Any HMOs	.470	.471
Log (HMOs + 1)	.015	.253
-----		
Any HMOs	.440	.324
HMOs	.010	.019
-----		
HMO enrollment	-1.20	3.80
-----		
HMO enrollment per 1000 population	-7.15	4.75

*Note:* Maximum likelihood estimates of the hazard of first passage of HMO enabling legislation in the states. Dashed lines indicate separate equations.  $N = 376$  state years; 46 states passed enabling acts.

1970s. Nor was California among the first to translate federal support for HMOs into state law. And while Kaiser and some other plans had flourished in the absence of HMO legislation, there is little evidence that they were well served by more informal accommodation. An HMO survey in 1973 (before the passage of the California enabling act) showed California plans to be at least as dissatisfied with their state's legal and policy environment as were HMOs in other states (Schlenker 1973).

On the other side of the coin, many states with few HMOs moved quickly to enact legislation. In fact, seventeen states passed enabling acts when they possessed *no* operating plans. Ten states without a single HMO (Tennessee, Florida, Iowa, Utah, South Dakota, Idaho, South Carolina, Kansas, Oklahoma, and Arizona) passed HMO laws before California (with sixty-eight HMOs) did.

### *Structural Arguments*

We next examine differences in the field structure of health care across the states. Following arguments about support for HMOs from organized health

purchasers, we examine the proportion of the labor force that is unionized and a variety of measures of business coalition activity. The latter include the number of operating coalitions, whether any coalitions exist, the number of statewide coalitions, and the number of "autonomous" coalitions (groups that exclude providers). To examine the possible role of health providers with generally positive stances toward HMOs, we look at the insurance market share held by Blue Cross and Blue Shield plans, the proportion of for-profit hospital beds, and the proportion of physicians in group practice. Finally, we examine indicators of competitive pressures that might force established actors to accommodate themselves to HMOs: physicians per capita, hospital occupancy, and insurance claims ratios.

Table 6-2 indicates that states with many physicians per capita were quick

**TABLE 6-2**  
Health Politics and the Structure of Health Care

	<i>Estimate</i>	<i>S.E.</i>
<i>Health Care Purchasers</i>		
Number of business health care coalitions	.07	.22
-----		
Any business health care coalitions	-.25	.47
-----		
Statewide business health care coalitions	-.25	.59
-----		
Autonomous business coalitions	.06	.31
-----		
Proportion of workforce unionized	1.38	1.66
-----		
<i>Health Care Providers</i>		
Blue Cross/Blue Shield market share	-.28	.94
-----		
Proportion of hospital beds in for-profit hospitals	1.57	2.35
-----		
Proportion of MDs in group practice	-1.93	1.63
-----		
Insurance claims ratio	2.95	2.39
-----		
Proportion of hospital beds unoccupied	-1.51	2.05
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MDs per 1,000 population	.69*	.38

*Note:* Maximum likelihood estimates of the hazard of first passage of HMO enabling legislation in the states. Dashed lines indicate separate equations.  $N = 376$  state years; 46 states passed enabling acts.

\* $p < .10$

to pass HMO laws. As Starr (1982) details, physicians are historically the main opponent of prepaid practice, both in the workplace and in the legislature. But collective resistance depends upon the profession's ability to present a united front, and physician oversupply makes this difficult. As market competition tightens, the interests of generalists and specialists, group practices and solo practitioners, and younger and older physicians tend to fragment. HMOs become for many a much needed stable patient base.

Other indicators of the structure of health care have weak and statistically insignificant effects. Neither the level of unionization nor that of business coalition activity accelerate HMO legislation. These weak effects make sense given the declining political capital of organized labor and the late entrance of business interests on the health scene.<sup>5</sup> Similarly, differences in the composition of health providers and in the market pressures faced by insurers and hospitals do not affect the passage of state HMO acts. The overall picture is consistent with one where HMOs provoked sharp opposition from physicians at the same time that other established interests sought a piece of the action.

### Discourse-Based Arguments

We do not measure variation in discourse across states, which is both difficult and less extensive than temporal variation. Instead, we examine the salience of problems that prevailing analyses of health care said HMOs would address. We look at state health costs, since federal policy discussions motivated HMOs as vehicles for health savings. We also examine state-level variation in access to health care, which was tied to HMO policy by Ted Kennedy but not theorized as a problem naturally suited to the HMO concept.

This approach suggests the close relation that can arise between discursive institutionalism and a choice-theoretic explanation. After all, rational choice arguments also imply that HMO laws would be quickly passed where the problems they were believed to address were most severe. While sometimes logics of appropriateness and efficiency are distinct or in opposition, here we see them as embedded. The case for HMOs was an efficiency argument, but one that was compelling because it was culturally appropriate. And it was culturally appropriate because it was a rational actor model. From a rational choice perspective the HMO discourse is analysis; from an institutional perspective it is data.

It is useful to note that the rich empirical literature on HMO performance (see Luft 1981 for a review) is inconclusive. Careful research documents cost savings for older, larger, more successful plans (like Kaiser or the Group Health Cooperative of Puget Sound) versus standard fee-for-service medicine. But a generic "HMO effect" is not apparent, and in fact the sorts of plans most stimulated by the new regulatory environment of the 1970s differ not at all from

conventional insurance. Further, health service research was generally unable to control for consumer self-selection into plans, out-of-plan spending, and differences in health care quality. These research limitations meant that advocates began with known success stories (Strang and Macy 1999) and generalized beyond them, relying on theoretical logics that audiences found credible. We would argue that what is crucial for policy is not whether HMOs economize or fail to economize, but that a theory of their behavior arose that transcended empirical data.

Table 6-3 examines conditions tied to the policy discourse surrounding HMOs. We examine health costs both in absolute terms (standardized for inflation) and relative terms (deviations from the national mean for each year). We examine the extent to which states suffer problems of inadequate access to health care by counting the proportion of underserved counties and people via a "medical scarcity" metric developed by the federal government to administer HMO grants.

HMO acts are linked to the price rather than the availability of health care. States with high health costs are quick to pass laws. The effect is largest where costs are measured as absolute levels — other specifications have coefficients in the same direction, but are not statistically significant. By contrast, the size of the medically underserved population has no effect on the passage of legislation.

It makes good sense that HMO laws connect to health costs but not medical scarcity. First, the policy debate virtually defined HMOs as an organizational bundle of incentives that produced economizing behavior; the link to equity

TABLE 6-3  
Discourse-Related Conditions and Diffusion Effects

	Estimate	S.E.
Health cost index	.32*	.18
Relative health cost index	.19	.15
Proportion of counties medically underserved	.13	2.71
Proportion of population medically underserved	.04	.47
Global diffusion	-5.71***	.41
Diffusion between neighboring states	-3.27***	.35

Note: Maximum likelihood estimates of the hazard of first passage of HMO enabling legislation in the states. Dashed lines indicate separate equations.  $N = 376$  state years; 46 states passed enabling acts.

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$

and access was much weaker. Second, the proponents of a market strategy were politically better placed than were the proponents of a national plan centering on universal coverage. While Ted Kennedy and others were able to attach some of their concerns to HMOs, the general policy movement was toward the support of profit-oriented HMOs with few public commitments. Efforts to structure HMOs around consumer interests, exclude physician-managed models, and foster wider access to care ultimately failed and came to appear artificial.

### *Diffusion Processes*

In addition to the lines of argument considered above, we also examine the spread of HMO legislation. Institutionalist discussions of diffusion generally argue that the way a practice spreads is strongly affected by its social meaning. Tolbert and Zucker (1983) suggest that local factors cease to influence diffusion either when central authorities mandate adoption or when a practice becomes taken for granted and politically uncontested. Strang and Meyer (1993) make the weaker claim that the development of theorized interpretations of a practice accelerate its diffusion and permit imitation without social proximity. These ideas can be contrasted with a notion of diffusion as fundamentally a social structural or network phenomenon, where practices spread between actors that are particularly close or attentive to each other (for a review of the diffusion literature see Strang and Soule 1998).

HMO enabling legislation closely matches the conditions for an institutional interpretation of diffusion. As described above, states did not begin to consider special legislation for HMOs until the federal government did. Once the federal government made HMOs the cornerstone of health reform, states risked seeming backward and unconcerned if they failed to act. And the rationale for health maintenance organizations was theorized in explicit and compelling ways by prominent health analysts like Paul Ellwood, Alain Enthoven, and Clark Havighurst.

To examine diffusion effects, we work within the heterogeneous diffusion framework proposed in Strang and Tuma (1993). This framework permits simultaneous analysis of internal factors, of differential susceptibility to influence, and of the impact of network patterns of proximity. To examine possible social networks underlying diffusion, we look for evidence of patterns of diffusion based on geographic proximity. States that are close to one another possess more information about one another's policies than do states that are far apart, and may be more likely to learn from each other. Neighbors may also share HMOs (or be concerned about sharing HMOs in the future), promoting explicit efforts at coordination.<sup>6</sup>

Table 6-3 indicates that the overall timing of HMO legislation is consistent

with a simple diffusion model where all states influence each other. The parameter for global diffusion indicates that on average, each new law increases the baseline rate by about 10 percent.<sup>7</sup> By the end of the observation period, when forty-six states have passed HMO laws, the estimated rate of enactment is more than four times its level in 1970.

The impact of diffusion among geographically contiguous states is considerably larger. HMO laws passed by neighbors are estimated to more than double the hazard of adoption. Of course, most states have between three and four neighbors (and none more than seven), so the total magnitude of this effect is about the same as that of a fainter global effect. But neighborhood effects capture more fine-grained patterns of diffusion, suggesting that learning and influence operate most readily within clusters of states that share governmental or social traditions, and where communication is frequent.

### *Combining Institutional Arguments*

Table 6-4 examines effects drawn from all the arguments posed above. We include the covariates shown to have a significant bivariate relation to HMO legislation — measures of physician density, health costs, and diffusion effects. We also incorporate a quadratic formulation of HMO density, since such an effect may operate net of other factors.

Model 1 suggests that diffusion processes dominate the passage of legislation, with weak effects of state characteristics. HMO density continues to have little impact on the passage of enabling legislation. Further, the coefficients of physician density and health costs diminish when both are included in the same equation. This occurs because the two covariates are strongly related ( $r = .52$ ). States with many physicians tend to have high medical costs, presumably because medical prices are supply driven and because physicians are drawn to areas where costs are high and working conditions good.

Additional models examine whether state characteristics interact with diffusion influences.<sup>8</sup> We find that the impact of health costs can be unpacked into two components: a positive direct effect and negative susceptibility to adoptions by other states. If states have high health costs, they tend to pass legislation rapidly regardless of what other states do. If states have low health costs, they pass laws at a rate proportional to the numbers of laws passed elsewhere.

Model 4 also shows that health costs boost legislative activity most strongly in the early years (1971–73), consistent with Tolbert and Zucker's (1983) discussion of diffusion dynamics. Before HMO laws are embraced by central actors and come to be "taken for granted" as standard health policy, they are largely passed by states where health costs are very high. But once a federal HMO law is promulgated, even states with low medical costs move quickly to enact HMO laws.



TABLE 6-4  
Multivariate Models of the Passage of HMO Legislation

	Model 1	Model 2	Model 3	Model 4	Model 5
$B_0$	-4.78 (1.75)	-5.02 (1.73)	-4.07 (2.14)	-3.89 (1.04)	-3.85 (1.04)
HMOs	-0.10 (0.22)	-0.17 (0.35)	-0.10 (0.16)	-0.07 (0.08)	-0.07 (0.08)
HMOs <sup>2</sup>	0.002 (0.003)	0.003 (0.005)	0.002 (0.002)	0.001 (0.001)	0.001 (0.001)
MDs per 1,000	3.99 (2.63)	4.18 (2.62)	3.48 (2.91)	1.62* (0.98)	1.63 (0.99)
<i>Diffusion Effects</i>					
Global diffusion	-5.22*** (0.21)	-5.52*** (0.39)	-5.26*** (0.34)	-5.30*** (0.36)	-5.53*** (0.59)
<i>Susceptibility to Diffusion</i>					
HMOs		0.14 (0.13)			
HMOs <sup>2</sup>		-0.01 (0.01)			
MDs per 1,000			-0.72 (1.50)		
Health cost index				-1.74*** (0.57)	-1.61*** (0.56)
<i>Proximity to Adopters</i>					
Diffusion between neighboring states					1.29 (1.54)
<i>Likelihood ratio</i>					
vs $h(t) = \exp(B_0)$	16.2**	19.7**	16.8**	25.7**	26.1**
df	6	8	7	7	8
vs Model 1		3.4	0.6	9.4***	9.8**
df		2	1	1	2

Note: Maximum likelihood estimates of the hazard of first passage of HMO enabling legislation in the states.  $N = 376$  state years; 46 states passed enabling acts.

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

Finally, model 5 reexamines the evidence for local patterns of diffusion. As shown in table 6-3, laws passed by neighbors are estimated to spur legislation more than do laws passed in geographically distant states. But this effect is not significant at conventional levels, and model 5 does not fit the data much better than model 4. Once differential susceptibility to influence across levels of health costs is captured, HMO laws are seen to have diffused nationally rather than via ties between geographically proximate states. This is consistent with Strang and Meyer's (1993) notion that theorization would allow diffusion to flow along weak ties.

### The Content of State HMO Laws

Models of the diffusion of HMO laws across the American states implicitly suggest that these laws have much in common. But do states enact the same law or do they shape legislation to their own ends and situations? To address this issue, we turn from the timing to the content of HMO acts.

Provisions of state laws are taken from reports prepared under federal contract by the Aspen Systems Corporation from 1979 to 1989.<sup>9</sup> We supplemented this data by coding all first state laws passed prior to 1979, and their amendments where these were indicated in state legal codes. This approach yielded annual characterizations of twenty-one provisions of each state's HMO enabling act, listed in appendix B.

### Routinizing the Technical

In many technical respects, there is little variation across state laws. HMO enabling acts typically require organizations to establish formal grievance procedures, institute quality assurance and utilization review, and specify the grounds for terminating enrollee participation. Minimum benefit packages are specified, HMOs are required to possess some kind of financial reserves, and nondeceptive advertising is permitted.

Taken as a whole, state laws tend to converge over time. Figure 6-2 plots heterogeneity (expressed in terms of deviation from a "modal state law") versus historical time.<sup>10</sup> Average distance from the modal state law declines from 14.5 in 1971 to 4.5 in 1989. The mean number of provisions in each state differing from this modal law declines from about 8.5 to 2.5.<sup>11</sup> The biggest reduction in heterogeneity occurs from 1971 to 1973, and is followed by a continuing, steady decline of some 40 percent from 1973 to 1989.

Two mechanisms produce homogeneity. First, acts passed in later years are closer to the "norm" than those passed early. Laws in Connecticut, Tennessee, Pennsylvania, and Minnesota that predate federal action are highly idiosyncratic;

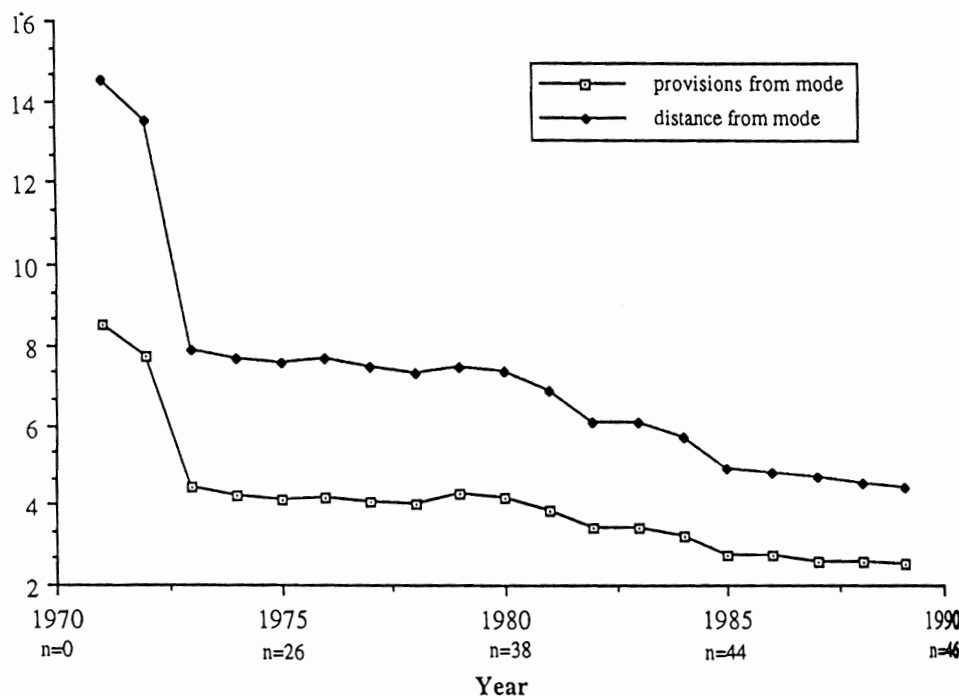


Fig. 6-2. Convergence to the "Typical" HMO Enabling Law. "Typical" HMO enabling law contains modal set of provisions listed in app. B (excluding open enrollment). Provisions from mode = number of provisions listed that differ from modal law. Distance from mode = sum of squared deviations from modal law (see text).  $n$  = number of states with a law (Aspen Systems Corp.; state legislative codes)

laws passed in the 1980s follow well-established patterns. And second, early laws are revised toward conventionality. Distance from the national mean and the frequency of revision are strongly correlated ( $r = .74$ ), and a very large percentage of all revisions lead toward what other states do. States that passed idiosyncratic laws in the 1970s replaced them with more typical laws in the next decade.

The emerging national norm was constructed around two salient models of HMO regulation. One was the federal HMO Act, which was not only cognitively salient, but threatened to supersede "unfair restrictions" on HMO activity. While this threat applied only to "federally qualified" HMOs and led to no courtroom challenges, virtually no state enabling acts include these restrictive practices. Laws passed after the federal HMO Act thus had more in common than those passed before it. Further, changes in federal law (such as the elimination of open enrollment) tend to be followed by changes in state laws.

A second source of national influence was a model HMO law written by the National Association of Insurance Commissioners (NAIC).<sup>12</sup> The NAIC code

was designed to facilitate the lateral movement of "best practice" across states. While formally a body composed of the fifty state insurance commissioners, the NAIC provides a common forum where the voices of state health experts, the "HMO industry," and other interests can be heard. Since the 1980s, the NAIC model has also been reworked by the National Association of HMO Regulators (NAHMOR), a group that emerged from a federal training program.

The NAIC reports that twenty-seven states have enacted substantial portions of its model law (NAIC 1989). The impact of the NAIC's model law is further shown by the close relation between its 1972 code and typical state acts of the late 1970s and 1980s. Incredibly, the 1972 NAIC code is closer to the modal state law in 1989 than is the average state in 1989! This similarity is shared by none of the original state laws passed before 1973, which are extensively revised toward conventionality in later years.

Convergence thus arises through the dense associational web within which state policy makers were embedded. This web has emerged over time with growing experience in HMO regulation. Each of the components of the system is national in scope — the federal government and its sponsorship of state activity, and the NAIC and NAHMOR. While early laws could be written freehand, HMO legislation today is in most respects highly routinized and constrained.

### Capturing the Contested

But while the overall trend is toward convergence, some issues remain contested. We would point to three provisions as embodying key political decisions. "Dual choice" provides HMOs with mandated access to employee groups, a potentially powerful weapon in gaining access to health care markets. "Open enrollment" requires HMOs to enroll all comers, including poor insurance risks. "Consumer representation" gives plan members a say over HMO governance, a provision that fit the ideology of community-based prepaid practices in the 1940s but not that of corporate-sponsored plans in the 1980s. While dual choice provisions were thus sought by HMOs and opposed by the enemies of managed care, open enrollment and consumer representation were opposed by HMOs and sought by consumer groups.

Table 6-5 examines the conditions promoting the passage of laws with and without dual choice, open enrollment, and consumer representation. We report a series of bivariate relations, and also utilize the "best fitting" model from table 6-4. In general, the arguments concerning the spread of HMO laws translate into predictions about provisions favorable to HMOs. For example, states with more HMOs, more business coalitions, or higher health costs are expected to quickly pass "HMO friendly" laws mandating dual choice and requiring neither open enrollment nor consumer representation.

Table 6-5 indicates two main findings. First, states with more HMOs are

TABLE 6-5  
Passage of HMO Legislation Carrying Specific Provisions

	Dual Choice		Open Enrollment		Consumer Representation	
	With	Without	With	Without	With	Without
<i>Bivariate Models</i>						
HMOs	0.97**	-0.04	0.09	0.03	-0.04	0.18
HMOs <sup>2</sup>	-0.09*	0.001	-0.02	0.00	0.001	-0.01
BC/BS market share	2.00	-0.90	-1.70	0.70	-1.10	-0.01
MDs per 1,000	1.16	0.56	-0.76	1.60**	0.17	0.87*
Business coalitions	-5.54	0.12	-6.54	0.24	-5.54	0.14
Health cost index	-0.30	0.40**	-0.50	0.70**	-0.60	0.50**
% Medically underserved	-3.30	0.30	0.60	-1.00	-0.50	-0.20
Global diffusion	-12.21	-5.51***	-13.14	-3.74***	-12.50	-5.37***
Diffusion between neighboring states	-4.41***	-3.34***	-5.14***	-2.95***	-10.47	-3.20***
<i>Multivariate Models</i>						
B <sub>0</sub>	-7.59***	-3.97***	-23.22	-4.00***	-5.54***	-3.63***
HMOs	1.28***	0.009	-7.92	-0.08	-0.04	0.09
HMOs <sup>2</sup>	-0.10*	0.001	0.11	0.001	0.001	-0.007
MDs per 1,000	1.05	1.37	3.38	1.99**	4.03	0.73
Health cost index	-1.35	1.25**	-6.14	1.19***	-2.52	0.91***
<i>Diffusion Effects</i>						
Global diffusion	-22.83	-5.29***	-5.12***	-5.84***	-5.91***	-5.32***
<i>Susceptibility to Diffusion</i>						
Health cost index	-20.25	-1.67**	-1.56***	-2.38	-2.29**	-1.45**
<i>Likelihood Ratio</i>						
vs h(t) = exp(B <sub>0</sub> )	15.07	15.59	4.10	19.50	7.81	14.59
df	6	6	6	6	6	6
Number of States Passing Law	10	36	22	24	12	34

Note: Maximum likelihood estimates of the hazard of first passage of HMO enabling legislation in the states. Dashed lines indicate separate equations. The top half of this table includes just a single effect in the bivariate models except for organization density, where we include both HMOs and HMOs squared. N = 376 state years; 46 states passed enabling acts.

\*p < .10, \*\*p < .05, \*\*\*p < .01

more liable to include "dual choice" mandates that oblige employers to make HMOs available to their workforce. (While the relationship is nonmonotonic, the linear term dominates over the range of observed variation.) Since HMOs are highly concerned with obtaining access to employee pools, this fits well with interest-group accounts of state regulation.

Second, high health costs lead to HMO laws that are generous to HMOs and dismissive of consumer concerns. Where costs are high, states are quick to pass HMO acts that lack open enrollment provisions and ignore consumer participation, and slow to pass laws that require consumer representation on governing boards. Diffusion effects point in the same direction, indicating that open enrollment and consumer representation laws spread among states with low health costs, while states with high costs pass laws lacking these provisions. These findings mesh with a view of HMO legislation as balancing consumer protection with concerns about spiraling health costs. Where costs are high, the balance tips away from efforts to use HMOs to broaden health coverage and empower consumers, and toward laws that facilitate HMO expansion.

Inspection of the content of HMO laws thus reveals opposed dynamics of convergence and local translation. On the one hand, an interaction network has emerged around HMO policy that promotes the standardization of state laws, particularly in areas seen as technical. On the other hand, decisions about how to balance the interests of HMOs and consumers remain politically contested, and are sensitive to well-mobilized interests as well as to the problems that regulators perceive.

## Discussion

While students of organizations have endeavored to theorize legitimacy, state policy makers legitimated a theory. Existing prepaid practices were not taken for granted or politically powerful, but a market model for health care was. Given mounting concerns about health care financing and the rising tide of neoliberal analysis, it is not surprising that a turn toward competitive discipline, entrepreneurship, and consumer choice surfaced in health policy. But without Paul Ellwood's insightful development of a new theory of prepaid practice, HMOs would not have been the beneficiary.

While Ellwood and other health analysts acted as rational choice theorists in arguing that HMOs correctly align incentives, we have acted as institutional theorists in treating these arguments as cultural discourse. Today the claims made on behalf of the HMO appear overblown at best, neglecting both the real difficulties of organization building and the potential for the interests of health financiers, providers, and consumers to conflict despite market competition. But what was important for empirical policy making was that a plausible theoretical logic defined the terms of political debate.

Naturalistic or interest-based arguments, we contend, are not very useful in explaining how or why HMOs gained the political stage. HMOs themselves were the product rather than the driver of federal policy. And seventeen states with no operating HMOs passed HMO enabling acts. Nor was initial legislation acutely sensitive to observable structures of interest and agency. Health purchasers showed little political muscle, and all sorts of health providers adopted flexible positions vis-à-vis HMOs. Physicians form an exception, and we see that HMO laws are passed more readily where physician "oversupply" deflated their opposition.

One can reasonably counter that the structure of interests in the health sector drew boundaries around possible HMO legislation. State and federal authorities could have given HMOs much more money, or required that all doctors be organized into HMOs, or that Medicare and Medicaid contract only with HMOs. The fact that such schemes were understood to be extravagant is undoubtedly related to the marginal status of prepaid practice before the 1970s. But if we wish to understand the laws that were enacted, we must attend to the interpretive construction of the HMO and the leverage it provided for movement beyond the status quo.

Though actual HMOs were hardly the motor of HMO policy, their reaction to the state's initiative had important consequences. At the federal level, prepaid plans mobilized to amend regulatory provisions they found inconvenient and turned them to advantage. States with more HMOs were less willing to experiment with consumer controls and more likely to write laws favorable to existing organizations.

The later evolution of HMO policy was the work of an emerging community of regulators as well as an emerging community of the regulated. Laws diffused across the states in institutional rather than network fashion. The spread of laws occurred nationally to states with low health costs rather than through regional networks. The catalyst was a national health and regulatory community that mobilized easily in the associational culture of the American polity. State laws were responsive to quasi-public agents like the National Association of Insurance Commissioners and its model law, and the National Association of HMO Regulators and its ideas about regulatory reform. It is even worth noting that much of the data utilized in this chapter were produced to contribute to policy-making discourse, from Aspen Systems reports on deviation from federal legislation to Interstudy's surveys of health maintenance organizations. In keeping with DiMaggio and Powell (1983), the result was homogenization.

While organizational institutionalists tend to agree about the strength of homogenizing forces, they disagree about why some practices are institutionalized and others are not. Hannan and Freeman (1987) see institutionalization as density dependent and thus as a self-reinforcing, natural process. DiMaggio (1982) contends that behind successful institutional projects lie the interests and capabilities of elites. While recognizing the force of both approaches, this

chapter argues for the power of cultural schemas in defining models that are comprehensible, communicable, and compelling. Without a strong link to neoliberal visions of markets, entrepreneurs, and rational organization, it is unlikely that the poorly regarded prepaid practices of the 1960s could have vaulted into the important position that HMOs occupy in American health care today.

## Notes

David Strang's work on this project was supported by a fellowship from the Center for Advanced Study in the Behavioral Sciences and by the National Science Foundation (SES-9213152). We thank Michael Wolfe for research assistance and Ronald Breiger, John Campbell, Neil Fligstein, Ray Liedka, John Meyer, Phyllis Moen, Ove Pedersen, Sid Tarrow, and Xueguang Zhou for their helpful comments. We also thank Rachel Rodgers of Aspen Systems Corporation, Carolyn Johnson of NAIC, and Christine Hotchkiss of NAMCR for their help in providing information on HMO laws and regulations.

1. Professional powers can be defended from an economic perspective by arguing that information asymmetry (doctors rather than patients know what's wrong) produces market failure and motivates an implicit offer from society of professional authority for occupational responsibility (Arrow 1963). For a vigorous critique taking Arrow to task for treating information asymmetries as exogenous rather than as the product of professional control, see Starr 1982, pp. 226–27.

2. Ellwood's speculations here were rather optimistic. While some kinds of prepaid plans reduce health costs, major savings come not from preventative medicine but by economizing on hospital stays (Luft 1981).

3. Where no specific enabling legislation exists, prepaid plans typically incorporate as insurers or service corporations or nonprofit corporations. Under these more general headings, HMOs may be obliged to carry capital reserves at levels designed for indemnity insurers (which they do not need because they provide rather than pay for care), and are vulnerable to claims that they constitute the corporate practice of medicine.

4. While the assumption that rates of legislative passage do not vary with time (net of covariate effects) is a strong one, results from partial likelihood models parallel those for the exponential models presented in tables 6.1–6.3. Below we examine complexities in a substantively important source of time dependence, that of diffusion processes.

5. No corporations testified in the initial federal HMO hearings, although the Committee for Economic Development, a group representing big business, did advocate HMOs in 1973. The high point of business coalition activity was 1982–85, a decade after the main wave of HMO lawmaking.

6. Very few HMOs operated across state boundaries until the development of national HMO firms in the mid-1980s, well after most initial state legislation. In 1981, when information was first collected on multistate HMOs, only 29 of the nation's 262 HMOs operated in more than one state. But all of these operated in geographically contiguous states, most often in New England.

7.  $\exp(-5.71) = .003$ . Since the baseline rate (where all variables are measured from

their means) is  $\exp(-3.22) = .039$ ,  $.003/.039 = .10$ . Note that a negative value for global diffusion does not imply a decrease in the hazard; instead, a large negative value implies a negligible increase in the hazard.

8. In a Monte Carlo study, Greve, Strang, and Tuma (1995) show that susceptibility to diffusion is easily confused with the intrinsic propensity to adopt, and that models should examine both kinds of effects simultaneously.

9. In accordance with a provision in the federal HMO Act, Aspen Systems reviewed all state laws relevant to HMOs on an annual basis. The intent of the federal government in funding this activity was to highlight to states the measures they needed to take to come into line with federal policy.

10. By modal state law we mean a law whose provisions are those most frequently found across the American states as a whole. Twenty of the twenty-one provisions retain the same mode throughout the study period (the exception is open enrollment, which is initially common but is employed by slightly fewer than half of the states by the late 1980s). For simplicity, we exclude open enrollment in computing the modal law and deviations from it.

11. Average distance measures squared deviations on a 3-point scale where values denote a provision's absence, unclear standing, or presence. Counts of the number of provisions that differ treat all deviations as having equivalent magnitude.

12. The NAIC is a body composed of the fifty state commissioners of insurance that disseminates information on the insurance industry and its regulation. HMOs are one of about two hundred domains addressed by NAIC model codes.

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## Appendix A

## Descriptive Statistics and Variable Sources

	Mean	S.D.
Any HMOs <sup>a</sup>	0.51	—
Number of HMOs <sup>a</sup>	2.53	6.34
Number of federally qualified HMOs <sup>a</sup>	0.42	1.42
HMO enrollment (100,000s) <sup>a</sup>	1.05	3.45
HMO enrollment per 1,000 population <sup>a</sup>	22.75	46.75
Any business health care coalitions <sup>b</sup>	0.14	—
Number of business health care coalitions <sup>b</sup>	0.25	0.77
Number of statewide business health care coalitions <sup>b</sup>	0.08	0.12
Number of autonomous business coalitions <sup>b</sup>	0.12	0.44
Proportion of workforce unionized <sup>c</sup>	0.24	0.09
Blue Cross/Blue Shield market share <sup>d</sup>	0.41	0.16
Proportion of hospital beds in for-profit hospitals <sup>e</sup>	0.05	0.06
Proportion of MDs in group practice <sup>f</sup>	0.25	0.10
Insurance claims ratio <sup>d</sup>	0.85	0.06
Proportion of hospital beds unoccupied <sup>g</sup>	0.27	0.07
MDs per 1,000 population <sup>h</sup>	1.36	0.35
Health cost index <sup>i</sup>	260.59	71.40
Relative health cost index <sup>i</sup>	-5.06	5.42
Proportion of counties medically underserved <sup>j</sup>	0.39	0.31
Proportion of population in underserved counties <sup>j</sup>	0.20	0.21

## Sources:

<sup>a</sup>National Census of HMOs (Interstudy, various years)

<sup>b</sup>Directory of Business Coalitions for Health Care Action (U.S. Chamber of Commerce, various years). Autonomous business coalitions are business health care coalitions with fewer than 5 percent of their members representing health care providers or insurers.

<sup>c</sup>U.S. Union Sourcebook (Leo Troy and Neil Sheffin, Industrial Relations Data and Information Services, 1985).

<sup>d</sup>Sourcebook of Health Insurance Data (HIAA, various years). Blue Cross/Blue Shield market

## APPENDIX A

(Continued)

share is the ratio of premiums paid to BC/BS to premiums paid to all third-party insurers. The insurance claims ratio divides benefits paid by premiums paid, for all insurers.

<sup>e</sup>Hospital Statistics (American Hospital Association, various years).

<sup>f</sup>Medical Groups in the United States (American Medical Association, various years).

<sup>g</sup>County Hospital File (various years).

<sup>h</sup>Physician Masterfile (American Medical Association).

<sup>i</sup>Health Care Financing Administration, various years. This index is calculated as mean Medicare reimbursements per enrollee, in hundreds of dollars. Relative health costs are deviations from the national mean for that year.

<sup>j</sup>Computed from the Index of Medical Underservice, Federal Register 40 (170) 1975: 40315-20. The federal HMO Act of 1973 provided for the designation of medically underserved areas, permitting certain benefits be provided to HMOs founded and operating in those areas. The index is constructed from the percentage of the population below the poverty level, the percentage of the population over age sixty-five, the infant mortality rate, and the number of primary care physicians per 1,000 population.

## *Appendix B*

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### Provisions of State HMO Enabling Acts

1. all HMOs must be certified under the act
2. operation is limited to non profits
3. the State Insurance Department is the primary regulator
4. HMO reorganization and dissolution is regulated as an insurer
5. a consumer representative on the HMO governing board required
6. a policy-making role for subscribers is required
7. advertising is permitted
8. deceptive advertising is prohibited
9. dual choice is required
10. required HMO benefits are enumerated
11. physician employment is restricted
12. copayments are permitted
13. open enrollment is required
14. grounds for enrollee termination must be specified
15. a grievance mechanism is required
16. quality assurance and utilization review are required
17. state approves HMO rates
18. adequate working capital is required
19. reserves or guarantees are required
20. Certificate of Need Law applies to HMOs
21. the state law meets federal HMO Law protections for qualified H.

*Source:* Aspen Systems Corporation, state legislative codes (various).