The Political Management of Managed Care: Explaining Variations in State Health Maintenance Organization Regulations

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Abstract In the 1990s, strong incentives for managed care organizations to control costs, once regarded as a fortuitous confluence of interests, came to be seen as antithetical to consumers' interests in quality of care. In response to this change in political climate, many states have greatly increased their regulatory control of managed care organizations since the mid-1990s. This activity is surprising in an era when public policy on health care issues is usually described as frozen, gridlocked, and/or stalemated as a result of intense activity on the part of organized interests. We take advantage of the variation in state regulations of health maintenance organizations (HMOs) to discover why some governments are able to address policy problems that are often perceived as intractable in a political if not in a true policy sense. From the history of HMOs, the backlash against managed care, and state responses to that backlash, we first extract a number of hypotheses about state regulatory activity. We then test these hypotheses with data on regulatory adoptions by states during the late 1990s and the early 2000s. Last, we discuss the findings with special attention to the role of politics in health care.

The rise and fall of managed care is perhaps one of the most significant stories to emerge from the politics of health care over the last four decades. Beginning with local efforts associated with rural cooperatives in the 1920s and expanding during World War II, through the efforts of Henry J. Kaiser, managed care had, by the late 1960s, become the pre-

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ferred option of many consumer advocates interested in a greater emphasis on preventive care, and it attracted favor in the 1970s with businesses interested in controlling health care costs. This seemingly happy confluence of interests led to such a rapid expansion of managed care that, by the end of the twentieth century, most Americans with private health insurance received care through managed care organizations.

The 1990s, however, were not an easy decade for the managed care concept. The strong incentives for health maintenance organizations (HMOs) to control costs came to be seen as antithetical to consumers' interests in quality of care and in choice of providers. The political response to this changing environment was not long in coming. During the mid- to late 1990s, states — and the federal government, too — considered a variety of proposals to rein in what were perceived as out-of-control HMOs. States, especially, were successful in imposing a wide range of regulations on the operation of managed care organizations, including the establishment of new rights for consumers and the application of new limitations on providers. To proponents, these were necessary correctives to a system that seemed to place more emphasis on controlling costs than on quality of care. To critics, these new regulations seemed to strike at the cost-saving rationale for managed care.

We are, however, less interested in the merits of these conflicting interpretations than in the rapid political response on the part of the states to public perceptions of serious problems with managed care. That is, in an era when public policy on health care is usually described as frozen, gridlocked, and/or stalemated at the federal level as a result of intense activity on the part of organized interests (Jamieson 1994a, b, c; West, Heith, and Goodwin 1996; Johnson and Broder 1996; West and Loomis 1999; Weissert and Weissert 2002; Quadagno 2005), many — though not all — states have acted with considerable dispatch in addressing public concerns about HMOs. We take advantage of this variation to discover why some governments are able to address what are often perceived as policy problems that are intractable in a political if not in a true policy sense. Indeed, we are especially focused on the role that organized interests have played in causing some states to be very aggressive in regulating HMOs and others not to be. From the history of HMOs, the backlash against managed care, and state responses to that backlash, we first extract a number of hypotheses about state regulatory activity. We then test these hypotheses with data on regulatory adoptions by the states during the late 1990s and the early 2000s. We discuss the findings with special attention to the politics of health care.

Our analysis will necessarily break new ground in that it is the first fifty-state analysis of the politics surrounding the adoption of anti–managed care legislation. We have assembled an original dataset on a dozen laws that allows us to further examine the stringency of these regulations and their perceived threat to the managed care industry. While we build upon the general literature on health care politics and policy, there is little in the coverage of managed care and the regulatory backlash to it to guide systematic political inquiry. There are books (e.g., Kinney 2002) and numerous articles articulating the need to regulate managed care (e.g., Sorian and Feder 1999; Cauchi 1999; Robinson 2003) and descriptions of the laws enacted. The most analytic of the latter focus on how the type of regulations enacted has changed over the course of time (e.g., Noble and Brennan 1999; T. E. Miller 1997); however, these articles do not attempt to examine the politics associated with passage of managed care regulations. There have also been a number of pessimistic essays about the ability of state governments to regulate managed care at all (e.g., Fox 1999; Stone 1999). These have been followed by a debate among lawyers and economists over the so-called death of managed care. While the managed care industry would argue that state regulations were so effective that they loosened gatekeeping restrictions and drove up costs for health plans, thereby killing true managed care, several scholars argue that social and market forces, not mandates, altered managed care practices (Hall 2005; Hall and Agrawal 2003). We think it is premature to argue about the effects of anti–managed care legislation because we currently know little about its origins. We begin our exploration with a short history of managed care, emphasizing its politics.

Managed Care Regulation in the States: A Short History of Managed Care

Prepaid health insurance had its origins in the rural cooperative movement of the 1920s and 1930s; it grew in the postwar period with union support and the leadership of Henry J. Kaiser in California, who set up a health plan for his workers in 1942 and opened it to the public in 1945. The first cooperative health plan—a community hospital—was established by a Lebanese physician in Elk City, Oklahoma, in 1929 (Starr 1982: 303; Coombs 2005). Group health plans that have survived into the twenty-first century appeared in Washington, DC, in the 1930s, in Seattle and New York in the 1940s, and in St. Paul in the 1950s. Cooperative medicine overcame many hurdles in the twentieth century, but its chief obstacle was

the opposition of physicians. In Washington, DC, the American Medical Association (AMA) prevented referrals to doctors who participated in fledging cooperative plans and denied them hospital-admitting privileges, leading to the association's conviction for violating the antitrust act (Starr 1982: 305). The antagonism of autonomous physicians to prepaid group practice became the defining feature of the politics of managed care.

Nonetheless, group health plans and their clones attracted members and doctors; as long as both patients and providers voluntarily chose their plans, embraced the same philosophy, and could exit the plans, the group-practice model worked fairly well in the 1960s and early 1970s. President Richard Nixon, however, seized upon prepaid group practice as a way to control health care costs, welcomed for-profit companies as sponsors, and adopted the new term "health maintenance organization."[1] In response, Congress passed the Health Maintenance Organization Act of 1973 that required employers of more than twenty-five employees to offer at least one HMO, if there was one in the area, and provided some subsidies to plans; this act spurred the growth of HMOs nationwide. What had been a radical group medical venture for workers and denounced as socialism by its critics was now a Republican and corporate effort to cut costs for employers—a dramatic shift in philosophy. What did not change was the stance of providers: the AMA still voiced opposition, although it was somewhat muted because these were Republican HMOs.

By 1982, HMOs had changed the provision of health care sufficiently for Starr (1982) to assert that corporatization had finally come to medicine, bringing with it a profound loss of physician autonomy. Enrollment increased during the 1980s as the federal government moved Medicare and especially Medicaid patients into HMOs. Large businesses made the same choice for employees. HMOs vertically integrated with hospitals to form new service delivery models, including physician networks working as "preferred provider plans" (PPOs) growing alongside staff-model HMOs. Together termed "managed care," these plans appeared to achieve significant cost savings over traditional indemnity plans, making them popular with private and public payers. The proportion of Americans with employer-sponsored coverage in managed care went from 5 percent in 1984 to 85 percent in 1998 (Titlow and Emanuel 1999: 944). Medicaid enrollment in managed care passed the 50 percent mark in 1998 (Oliver 2004: 712).

1. Minnesota's Paul Ellwood convinced Nixon of the merits of the idea, based upon the savings achieved in the Twin Cities marketplace by Group Health and other health maintenance organizations (HMOs); Ellwood also coined the term "HMO."

The impetus for backlash came when both patients and doctors were forced into managed care plans. Between 1994 and 1996, private employers shifted from mostly offering their workers a choice of health plans to roughly half offering only a single plan, usually one emphasizing managed care (Thorpe 1999: 951). Often that option was the lowest bid from a for-profit managed care firm and might change every year or two, disrupting patient-doctor relationships. To stay in business, physicians had to contract with managed care companies. By the early 2000s, 88 percent of physicians had contracts with managed care companies; these doctors received 41 percent of their income from managed care (Casalino 2004: 874). Employers put millions of unwilling patients into managed care companies where they were treated by doctors often equally unwilling to be contractually related to the company. Physicians lost professional autonomy—and often income as well—compared to the past; patients were suspicious of decisions made by cost-conscious insurers, especially for-profit ones. Without the exit option, doctors and patients turned to politics.

The backlash against managed care at the federal level began shortly after the failure of President Bill Clinton's proposed Health Care Security Act in 1994. Clinton's bill had intended to introduce managed competition into the health care marketplace, which would in turn give consumers choices. Without this form of private regulation, consumers and providers turned to the government for relief from managed care bureaucrats. Fifty patient protection measures were introduced in Congress in 1997 and 1998 (Brown 2001). In early 1999, more than ten comprehensive reform bills were introduced. Although a patient protection bill eventually passed both houses of Congress, it languished and died in conference in June 2001. This increase in legislative activity was not an accident but was founded on legislators' attentiveness to constituents. Managed care as a problem emerged in national polls after 1994, when employee choices began to evaporate. According to Jacobs and Shapiro (1999: 1023), between 1994 and 1998 Americans changed their minds about HMOs, leading 70 percent or more to favor consumer protection laws.

Federal legislators, in fact, were a bit late in responding to this change in public opinion. State policy makers began to turn their attention to "managing" managed care as early as 1994 and 1995, well ahead of the federal government. In the first half of 1996, more than four hundred bills to regulate managed care were introduced in state legislatures (T. E. Miller 1997: 1102). The first wave of laws was primarily the result of lobbying by physicians. "Any willing provider" (AWP) laws were adopted for

the first time in 1994 by seven states. Three states enacted the first bans on "gag rules" the next year.[2] While the latter is not as significant given that physician behavior can be monitored in ways other than contractual obligations, AWP laws strike at the heart of managed care and its ability to manage costs and deliver consistent care. State consumer protection laws followed, beginning in 1996 and 1997. In 1996, for example, Florida enacted a law setting up the office of ombudsman to assist consumers in filing complaints against managed care companies. In 1997, the state of Texas passed the first liability law, giving patients the right to sue health plans for malpractice damages. That same year seven states enacted the first laws requiring that patient appeals be reviewed by an independent external reviewer. The possibility that medical decisions will be reviewed and overturned by an outside reviewer — or even worse, from the perspective of HMOs, by a court capable of assessing monetary damages — either shapes up health plan bureaucrats or leads to the practice of defensive and more expensive medicine, depending on one's point of view.

The Texas liability law was eventually overturned by the U.S. Supreme Court in 2004 (*Aetna Health Inc. v. Davila*, 542 U.S. 200).[3] In the *Aetna* case, the Supreme Court clearly ruled in favor of the Employee Retirement Income Security Act (ERISA) preemption, which places the regulation of fringe benefits at the federal level. The looming presence of ERISA surely complicates enforcement of state health and insurance regulations and has led some critics to charge that state laws are "toothless" (Stone 1999). The U.S. Congress passed ERISA in 1974 to protect workers, specifically in terms of their pension plans and other fringe benefits, and to offer employers regulatory consistency across state lines. States have regulatory authority over health plans and health insurers but not over self-insured workplace benefit plans, the so-called ERISA plans. Large employers quickly figured out that they could self-insure, come under ERISA, and thus escape state regulation.

More generally, however, the states have keenly protected their regulatory turf. This is especially true in regard to potentially broader federal

2. A "gag rule" is a provision, allegedly included by some HMOs in their contracts, that prohibits providers from discussing treatment options with patients.

3. The *Aetna* ruling also clarified that employees covered by the Employee Retirement Income Security Act (ERISA) plans cannot sue their health plans in state courts for coverage decisions. Rather, they must sue in federal court where the damages are more limited. In federal court, one can only collect monetary damages in the amount of the benefit denied. In state court, one can bring a personal injury lawsuit and collect the cost of all remedial health care, past and future, all wages lost, plus pain and suffering and other nonpecuniary losses (Bovbjerg 2003: 378).

patient protection acts that were on political agendas during the latter half of the 1990s. When the passage of such acts seemed likely in the spring of 2001, officials of the National Conference of State Legislatures (NCSL) testified in Congress that while they welcomed a federal floor of protection for all, they strongly opposed preemption of state insurance laws and efforts to expand the ERISA preemption. They especially did not want any dilution of current state regulations in order to meet lower federal standards (Monson 2001).

Even the ERISA preemption, however, may not be as big a hurdle as originally thought. Indeed, in two cases subsequent to the NCSL testimony, the U.S. Supreme Court failed to apply the ERISA preemption, leaving states with plenty of regulatory leeway. In 2002, in *Rush Prudential HMO v. Moran* (536 U.S. 383), the Court said that states can require independent external review of coverage denial decisions by HMOs and insurance companies that are fully insured.[4] The next year, the Court upheld the "any willing provider" law in the case of *Kentucky Association of Health Plans v. Miller* (123 S. Ct. 1471, 1478 [2003]). According to Bloche and Studdert (2004), Justice Antonin Scalia's majority opinion seemed to signal an all clear for state regulation of plans.[5]

Indeed, managed care organizations seem to have accommodated themselves to state regulation to a considerable degree. Bloche and Studdert (2004: 36), for example, argue that since the late 1990s managed care organizations and their investors have dealt with potential legal conflict and consumer backlash as a conventional type of business risk. Thus, state laws and court cases may have more of an impact through their effects on market actors' perceptions and expectations rather than through their tangible proscriptions. Moreover, HMOs have their own bureaucratic routines. Once they establish an ombudsman office, an internal appeals process, report cards on the Internet, and so forth, HMOs often extend these measures across the organization. It would be far too confusing to have report cards posted for members with one kind of insurance coverage and not to allow members with different coverage to read the report cards.[6] On

4. The national accrediting body for HMOs, the National Committee on Quality Assurance (NCQA), had already made external review of medical necessity denials a requirement for accreditation in July 2000.

5. The *Aetna* decision in 2004 ran the other way because the Court ruled that the state of Texas cannot create new substantive rights; in other words, it cannot force an HMO to provide any specific set of benefits. This doctrine is not contrary to the Court's previous ruling in *Rush Prudential* or *Kentucky Association*, according to Sebok (2004).

6. In interviews with national health plan leaders, Hall (2005: 445) found that after detecting a trend in state legislation, they usually adopted the law uniformly, if it did not impose large

these types of services, HMOs might well prefer to avoid organizational nightmares and the resultant bad publicity arising from an overly legalistic extension of protections to different classes of patients.

Given both these supportive court cases and the power of bureaucratic routines, we believe that state protection laws are far from "toothless." Indeed, these laws and the broader anti–managed care movement that supports them seem to have won the day. Robinson (2001) announced "the end of managed care," asserting that managers — cost-conscious employers, insurers who manage care, and physicians, unwilling managers of cost — were in full retreat. The consumer, Robinson claimed, had won. A similar cry was sounded by Havighurst (2002) in an article with a section subtitled "Managed Care Is Dead! Long Live Managed Care." Enrollment data support the central thrust of these claims, if not their extremity. In 1998, for the first time, commercial enrollments in HMOs declined: they went from 31 percent in 1996 to 27 percent in 1998, while PPO and point-of-service (POS) enrollments increased, respectively, from 26 percent and 7 percent in 1993 to 35 percent and 24 percent in 1998 (Kaiser Family Foundation 2002: 23). These trends continued as the looser forms of managed care proved popular with consumers; conventional fee-for-service (FFS) enrollment dropped from 27 percent of the market in 1996 to only 4 percent in 2002. Subsequently, double-digit premium increases returned in 2001 for employer-sponsored health insurance because costs were no longer being managed (Alliance for Health Reform 2004).[7]

The Determinants of Regulatory Activity

Most of the states had enacted regulations by the end of 2000. A few states completed enacting regulations in 2001 and 2002, but by the end of 2002, patient rights were well established in state regulations. Thus, the legal phase of the managed care backlash seems to have ended for now, but it will surely be remembered as an unusually successful episode of political-regulatory protest.

There is still some question of whose protest this backlash against managed care was. No definitive study has been conducted, but Brown's (2001:

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costs, for reasons of administrative simplicity. Similarly, large insurers said that they included less objectionable regulations as part of their standard package for self-insured employers even though ERISA protects them from having to comply. This was also the experience of one of the authors while serving as a consumer member of the board of directors of a large HMO in Minnesota.

7. Havighurst (2002) predicted this rise in health care costs after the regulatory backlash compelled managed care to loosen up, a trend that may bring back tight cost controls.

95) interviews from the second Community Tracking Study conducted in 1998–1999 suggest that organized interests played a crucial role in the adoption of managed care regulation by the states.[8] His interviews identified physicians as the only group acting as the prime mover for adoption of managed care regulations in all twelve study sites. These regulations include measures that address physicians' economic concerns (e.g., AWP laws), the agenda of specialists (e.g., direct patient access to specialty care), and the rights of health care consumers (e.g., ombudsman positions).[9]

Physicians' support for anti–managed care regulations is consistent with the economic theory of regulation (Stigler 1971), which states that occupational interest groups solicit from government regulations designed to operate for their benefit. Studies in various areas of health policy have demonstrated such an effect for providers: for example, Pracht and Moore (2003) showed that the percentage of pharmacists belonging to the state American Pharmaceutical Association had a strong positive impact on the prescription drug reimbursement rate under Medicaid. Grogan (1994), in a sophisticated analysis of Medicaid benefit policies, demonstrated that provider groups, including physicians, had a significant impact on generosity of benefits with low salience to the general public. Tolbert and Steuernagel (2001) considered the strength of the physician lobby (measured by the size of the medical establishment relative to population) in predicting passage of state mandates for women's health, such as direct access to ob-gyns. They found this measure significant in a multivariate model.

The second source of demand for regulation identified by Brown (2001: 96) is the advocacy community, a varied assortment of organizations presumed to represent members or potential members of HMOs. These organizations include those representing patients with chronic diseases or disabilities, those concerned with the health of a particular demographic category (e.g., women or the elderly), health reform or consumer groups, and economic and professional groups (e.g., unions or nurses). The size of

8. See also Ross (1999), who applies Robert Alford's classic model of structural interests to the regulation of behavioral health care, classifying mental health providers in organized professional guilds as dominant structural interests, managed care organizations as challenging structural interests, and patient and consumer groups as repressed structural interests. Thus, Ross's analysis of the demand for regulation of managed care and the opposition to it in the mental health field is quite consistent with Brown's analysis.

9. In the third wave of the Community Tracking Study (1998–2000), Brown and Eagan (2004) expected to find physicians reempowered by virtue of their triumph over managed care. However, after a study of four policies in twelve sites, they report that providers wield power when they are united among themselves, when they ally with other interests, and when they face little or no opposition (ibid.: 1062).

the advocacy community varies. In Massachusetts, for example, the coalition to reform managed care embraced ninety different organizations, whereas in other states the advocacy communities were quite small.

The key opponents of patient protection laws at the state level seem to have been the same ones who stopped it in Congress: business associations (e.g., chambers of commerce, purchaser coalitions, and small business groups), managed care associations, and sometimes individual business firms and HMOs. The avoidance of regulation is an obvious incentive for HMOs, but their opposition may not have always been absolute or highly public. Brown (2001: 100) reported, for example, that instead of trying to kill regulations, opponents often worked with legislators to produce more "reasonable" regulations that they could live with (see also Sorian and Feder 1999). Perhaps the most plausible interpretation is that when they saw the political handwriting on the wall, HMOs shifted from strict opposition to a stance designed to at least partially accommodate the inevitable. Business interests opposed regulation as a blow against the cost-cutting effectiveness of managed care organizations, a feat that seems to have been confirmed by the upward trends in health costs reported earlier. We also added to this list of opponents one more set of actors: lawyers, who might well prefer to manage managed care on a retail basis via use of malpractice suits than wholesale through regulatory activity.

Finally, we must also account for the entire size of the health interest system given Gray and Lowery's (1995) finding that crowded interest systems make the passage of *any* legislation more difficult. Their fifty-state study examined the effect of the density of interest groups in 1990 upon the states' legislative output in 1991. They found that states with more groups had fewer enactments and a lower ratio of enactments to bill introductions. The general policy literature now finds that policy agendas are limited (Jones and Baumgartner 2005): the more crowded the agenda, all other things considered, the less likely that a measure will pass. Moreover, the size of the state interest community is directly and positively responsive to how crowded state policy agendas are (Gray et al. 2005). Given these complex relationships, we need to control for the density of the policy community or the overall proportion of health interest organizations in state interest communities.

The specific hypotheses about interest organizations that follow from the above discussion are:

H1 Enactment of anti–managed care regulation is more likely to occur in situations in which physicians are represented by interest organizations

H2 Enactment of anti–managed care regulation is more likely to occur in situations in which there are broad sets of advocacy, consumer, or reform interest groups
H3 Enactment of anti–managed care regulation is less likely to occur in situations in which employer coalitions, health plans, and insurance companies are represented by interest organizations
H4 Enactment of anti–managed care regulation is less likely to occur in situations in which HMOs are represented at the legislature either individually or by interest organizations
H5 Enactment of anti–managed care regulation is less likely to occur in situations in which lawyers are represented at the legislature by interest organizations
H6 Enactment of anti–managed care regulation is less likely to occur in situations in which the number of health interest organizations is proportionately high compared to the total number of interest organizations

While we find Brown's (2001) emphasis on the role of organized interests a congenial one, it is also probably incomplete. At least one other set of actors had a significant part in the drama: the politicians who adopted the laws creating the regulatory requirements.[10] Three hypotheses merit attention here.

First, public opinion turned sharply against managed care in the mid-1990s. Politicians are quite skilled in following public opinion (Erikson, Wright, and McIver 1993), and political scientists since V. O. Key Jr. (1949) have thought that the incentives to do so should be especially great in states with more competitive political parties in which lawmakers are constrained to respond to voters' preferences. E. A. Miller (2005) reports that party competition is positively related to more generous state Medicaid programs, and he uses these results as evidence that states with more open systems generate higher levels of government activity. Thus, regulatory activity should be greater in states with more competitive political parties.

Second, while doctors may well have had significant self-interest in promoting regulation, the anti–managed care movement was also identified as a consumer issue. Therefore, states with more liberal electorates and greater Democratic control should have provided more fertile ground for supporters of managed care regulation.

10. To be fair, Brown and Eagan (2004: 94) mention politicians as a third source of regulation but treat them more as pass-through mechanisms for interest groups and public opinion than as causal agents per se.

Other studies that have found ideology to be significant in explaining states' adoption of health regulations and reforms include Barrilleaux, Brace, and Dangremond (1994). Ideological liberalism was the most significant contributor in thirteen of their twenty-one separate models. E. A. Miller's (2005) meta-analysis of the state health policy literature between 1975 and 2002 concluded that state public opinion plays a significant role more often than almost any other determinant. He found that liberal public opinion is positively associated with many health policy outcomes. A study by Tolbert and Steuernagel (2001) focused on state mandates affecting women's health, most of which were aimed at HMOs. Democratic Party control was among the top two factors that mattered the most for explaining the pattern of adoption; the size of the state's physician workforce was the other factor. Likewise, Paul-Shaheen (1998), in a comparative case study of seven states' attempts to enact comprehensive health insurance, found that control by the Democratic Party was essential for enactment.

Finally, one expects that the objective need for regulation and states' capacities to regulate also may have played a role in the adoption of managed care reforms. One aspect of objective need is the extent to which a state's health care marketplace is dominated by managed care organizations: if there are no HMOs present in a state, presumably there is little need for regulation. We will see that HMO presence varied markedly across the states during the period of regulation. Support for regulation should have been stronger in states in which HMO penetration was extensive, as consumers would have had more opportunity for negative experiences and lawmakers should have heard more complaints. Another potential marker of objective need concerns the frequency of malpractice suits across the states. High relative numbers of such suits — even those not necessarily directed at physicians in HMOs — might signal elected officials that they could gain something by attempting to regulate quality in managed care.[11] Last, while they may perhaps be more attentive to policy adoption than to policy impact, legislators might find that reliance on the wholesale regulatory solutions in their toolkits is more appealing in states with greater capacities for regulation.

11. Malpractice payment reports must be submitted to the National Practitioner Data Bank when an insurance company or self-insured entity (but not a self-insured individual) makes a payment for the benefit of a licensed health care practitioner in satisfaction of a malpractice claim. A state's malpractice rate may be underreported if a physician is allowed to hide behind the "corporate shield" of the codefendant HMO. If the practitioner is named in the claim but not in the settlement, no report has to be filed in the data bank.

In the literature on the politics of regulation, it is well recognized that enhancing administrative capacity will allow agencies more autonomy and resources and will enable bureaucrats to have higher salaries and be more professional. This will likely lead agency professionals to serve as independent sources of policy input, countering the impact of interest groups in favor of consumer interests (Teske 2004: 27–28). Among the scholars who have found administrative capacity to be important in predicting health reform and regulation are Barrilleaux, Brace, and Dangremond (1994). Their capacity measure is a factor score based on components from the administrative branch and the formal powers of the governor; this factor score emerges as significant in three-quarters of their policy adoption models. Similarly, E. A. Miller's (2005) summary of the health policy literature indicates that states with greater administrative capacity may exhibit more active and influential bureaucracies. He reports that a majority of the relationships between policy outcomes and agency resources and influence were positive and significant.

The specific hypotheses about the additional independent variables can be stated as follows:

H7 Enactment of anti–managed care regulation is more likely in states with more liberal public opinion
H8 Enactment of anti–managed care regulation is more likely in states with close competition between the major political parties
H9 Enactment of anti–managed care regulation is more likely in states whose governmental institutions are controlled by the Democratic Party
H10 Enactment of anti–managed care regulation is more likely in states where HMO market penetration is higher
H11 Enactment of anti–managed care regulation is more likely in states with higher relative numbers of malpractice suits
H12 Enactment of anti–managed care regulation is more likely in states with greater capacity for regulation

Testing the Hypotheses

Data and Operationalizations

The dependent variables in our analyses are several versions of an index of intensity in state regulation of managed care organizations. Our selection of laws regulating managed care was guided principally by the study "Tracking State Oversight of Managed Care," which was published jointly

by the Milbank Memorial Fund and the Reforming States Group (RSG) in 1999. The Milbank Memorial Fund is a national foundation that studies health policy. The RSG is an association of health policy leaders from the legislative and executive branches of the states, making the organization uniquely qualified to select policies important in the states. From their list of five policies affecting consumers, we selected four: the right to sue health plans for damages (liability), the requirement for independent external review of appeals, the requirement for a graduated internal review of appeals (all states require some internal grievance process), and the institution of an ombudsman program. This data source has a second list of ten types of policies affecting the patient-provider relationship (i.e., these policies would be of more interest to physicians and other providers). Several of these, however, might be of interest to patients, too. From their list of ten, we selected seven: AWP laws, bans on provider financial incentives, continuity of care protections, rules on standing referrals to specialists, allowances for direct access to ob-gyns, policies granting emergency room (ER) access under the "prudent layperson" standard, and bans on gag rules. We have omitted the policies on the Milbank list for which data was not available.

We then canvassed the Web sites of the Kaiser Family Foundation, the NCSL, the Health Policy Tracking Service, and other Internet sources to determine dates of adoption and stringency of the regulations as well as any other significant policies we might have overlooked. Through this process, we became aware of "report card" rules and added these to the consumer protection set.

We focus on the time period of the 1990s because the backlash against managed care occurred during this period and it is also the period for which we have interest group measures. Importantly, we do not measure whether states adopted a "Patient Bill of Rights." All but four states adopted such measures by 2002. Indeed, some states adopted such laws several times. Closer inspection, however, suggests that these laws were a mixture of apples and oranges and that their primary value inhered in their politically appealing label. We focus instead on the specific regulations states adopted that had substantive meaning for the ways in which HMOs operate and/or interact with patients. Clearly these are not the only anti–managed care regulations in existence today, but we believe they were the focus of the political battles in the states in the 1990s. Moreover, we could obtain detailed information on the stringency of these regulations, not just on the dates of their adoption, making them ideal for the

purposes of our study. The appendix lists the specific data sources for these laws.

The several dependent variables are all constructed upon data on state regulations governing the twelve kinds of activities by HMOs seen in table 1. These rules and regulations are self-explanatory, given the descriptions in the table and our earlier discussions of the efforts of states to regulate managed care. The simplest form of the dependent variable is a count of the number of these regulations states adopted by 2002 (Cronbach's alpha = 0.63).[12] As seen in figure 1, only one state (North Carolina) adopted all twelve regulations, while two states (Wyoming and Mississippi) adopted only two.[13] While these counts constitute the basis of all of our dependent variables, simple counts alone do not utilize the full range of information we have about these regulations. That is, the adoption of several of the rules—liability laws or the laws mandating the right to sue, bans on provider financial incentives and gag rules, rules allowing access to emergency rooms under a prudent layperson guideline, and the establishment of ombudsmen and report cards—are truly dichotomous in that states either have them or do not. The stringency of the other six regulations varies, however, across the states. Regulations mandating independent external reviews of appeals are in some cases binding and in others not. In cases where stringency varies, then, we modify the simple count codes in the manner described in table 1. Again using independent external reviews, states with nonbinding requirements are coded 1 and states with binding rules are assigned a code of 2. The second dependent variable, then, is the sum of the standardized scores for all twelve of the managed care regulations, with the coding of six of the rules expanded to account for variations in stringency.[14] Each regulation's stringency score is standardized first on a 0–1 scale, and then added together to form a single index; thus, regulations are weighted equally in the index; that is, their relative contribution to the overall index does not depend on the range of their individual stringency codes.

The third and fourth versions of the dependent variable add another

12. While our basic dependent variables *count* numbers of regulations, we do not think that it is appropriate to treat this measure as a "count" variable for the simple reason that its components are not recurring events. Once a state mandates use of an ombudsman program, it need not do so again. Thus, the ordinary least squares (OLS) regression analysis of the model using the simple "count" variable was also estimated using Poisson and negative binomial estimation procedures. The substantive results of these models are essentially identical to those reported in table 3.

13. The mean number of adoptions was 7.30 with a standard deviation of 7.24.

14. The standardized variable generated a mean of -0.01 and a standard deviation of 5.19.

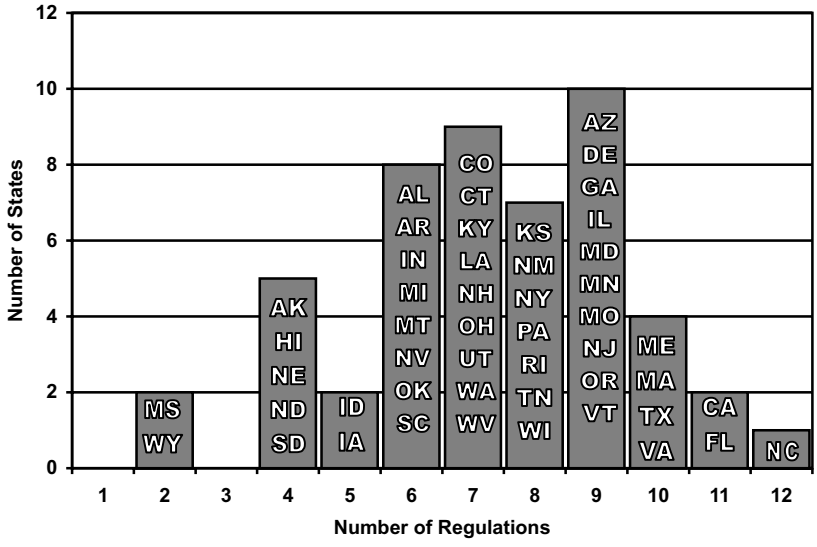

Figure 1 Frequency Distribution of Managed Care Regulations by States

wrinkle to the analysis by ranking the twelve regulations by substantive importance rather than treating all twelve regulations as if they were equally important to providers and consumers or equally feared by the managed care industry. Obviously this was not the case. We address this variation by weighing the twelve regulations on a three-point scale to tap the importance of the regulation (or the threat from the industry's perspective).[15] As seen in table 1, three regulations — concerning HMO report cards, ER access under a prudent layperson standard, and bans on gag rules — were assigned a score of 1, indicating that we consider these to be the least threatening of the twelve regulations. Report cards contain the type of information that health plans actually like to make available — data that allow consumers to compare competing plans on quality, finances, and service. The ban on gag clauses in physician contracts is of lesser impact because no health plan has actually had such a clause (U.S.

15. To some extent, our classification of the importance of the regulations reflects how they were discussed in the health policy literature and the general press during the late 1990s. Even more importantly, they are also based on the experience of one of the authors who served on the consumer board of directors of a large HMO for nine years and was chair for two years. Thus, our coding of importance reflects to a considerable degree how the HMO industry evaluated the threat of the proposed regulations on the conduct of business.

Table 1 Types of Managed Care Regulations Adopted by the States

Highly Restrictive Regulations
1. Liability: right to sue health plans for damages
2. Independent external review of appeals required
   Stringency varies by whether the external review is binding; with binding reviews coded 2, nonbinding reviews coded 1.
3. Any willing provider law
   Stringency varies by breadth of coverage; laws limited to pharmacists coded 1, laws applying to physicians and most providers coded 3, and others coded 2.
4. Bans on provider financial incentives

Moderately Restrictive Regulations
5. Ombudsman program
6. Graduated levels of internal review
   Stringency varies by whether the HMO is required to assist in the filing for an internal review; laws coded 2 if yes and 1 if no. Stringency also varies by time frame for review; laws coded 2 if there is a time frame and 1 if there is not.
7. Continuity of care protections
   Stringency varies by extent of coverage; laws coded 1 for 30 days coverage, 2 for 60 days, 3 for 90 days, 4 for 120 days, 5 for term of pregnancy, 6 until end of year, with one more point added if law covered medically necessary cases and pregnancies.
8. Standing referrals to specialists
   Stringency varies by extent of coverage; laws coded 0.5 if six months for dermatology only, 1 for standing referral for one year, 2 if specialists can coordinate care within scope of their practice, and 3 for no limit.
9. Direct access to ob-gyns
   Stringency varies by extent of coverage; laws coded 1 if limited to one visit per year, 2 if no limits.

Less Restrictive Regulations
10. Health maintenance organization report card established
11. Emergency room access under "prudent layperson" standard
12. Bans on gag rules

General Accounting Office [GAO] 1997) and because organizations have other ways to motivate physicians. While the prudent layperson standard for ER admission costs money, it is hard for anyone to argue against the idea, especially after 1997 when Medicaid began to require it.[16]

16. We also tested two additional versions of our model using the most important regulations and the combination of the moderately and least important regulations as separate independent variables in order to see if the roles of the several determinants were similar across the different

In the top category, assigned a value of 3, are four laws that are perceived to really restrict management in dealing with providers or patients in situations such as being sued by patients, facing binding external review, not being able to incentivize providers, and having to accept "any willing quack," in the parlance of the industry. With such laws in place, HMO managers fear the costs of malpractice and external review claims and bad publicity from lawsuits. If HMOs have to accept just any physician, they may have less ability to guarantee a desired level of quality of care (or cost).

In the middle tier, assigned a value of 2, are policies that modify the behavior of managed care organizations in some ways but do not threaten their very survival. The requirements for internal review, continuity of care after the physician or the patient (if terminally ill or pregnant) leaves the plan, standing referral to specialists (without going through a gatekeeper each time), and direct access to ob-gyns (again without going through a gatekeeper) are not anathema as concepts. Opposition varies more with the stringency and implementation of these policies—how long is continuity of care required? and under what circumstances? The ombudsman program is also placed in the middle tier because opposition to it depends more on the scope and resources of the office than on its existence.

These importance values are then multiplied by either the simple counts of the first independent variable or the standardized stringency values of the second dependent variable to generate *weighted* versions of both.[17] While the four dependent variables represent distinct efforts to account for variations in the stringency and/or the substantive importance of the twelve regulations, they are all closely related: the weakest correlation among them is 0.90.[18]

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types of regulations. In both models, an additional variable was added to the models—the number of the other types of regulations that were adopted. In general, the results of these separate tests are quite similar to those reported in table 3 for all of the regulations in combination. However, one difference between these sensitivity tests and those reported in table 3 is worth noting: the estimates for the number of the other types of regulations that were adopted by a state were negative and significant in both models. This suggests that the adoption of one set of regulations often acted as a substitute for the adoption of other types of regulations. If legislators had acted on the HMO issue by adopting one set of regulations, they were then somewhat less inclined to adopt others. One implication of the substitution process is that it is very difficult to analyze the adoption of each of these regulations or subsets thereof independently of each other. They are best analyzed as a single cumulative index, as is done here.

17. The means of the two new weighted dependent variables are 14.74 and -0.02, respectively, while their standard deviations are 4.72 and 10.78, respectively.

18. The correlation between the simple count measure and the other three measures is as follows: the standardized stringency measure (0.94), the weighted count measure (0.98), and the weighted standardized stringency measure (0.92). The correlation of the standardized stringency measure with the weighted count variable is 0.90 and with the weighted standardized stringency measures is 0.97. The correlation of the two weighted measures is 0.93.

Before describing the independent variables, it is first worth noting that both the unusually rapid pattern of the adoption of these laws and limits in data availability constrained how we were able to test the hypotheses about the dependent variables. In terms of the latter, we could not secure reliable data on all fifty states about the year of adoption of three regulations of HMOs. These include rules pertaining to internal grievance procedures (which were adopted in all fifty states), standing referrals, and access to ob-gyn specialists (enacted by more than half the states). However, we could obtain detailed rules about the stringency of these three regulations, so we elected to include them.

Where timing data is available for the other nine laws, it is clear that state regulations of HMOs diffused rapidly during the last half of the 1990s. This rapid diffusion pattern characterizes all of our dependent variables: only one variable's time series extends as long as ten years. This makes it very difficult to analyze the data using a pooled design. The independent variables, being electoral or economic in nature, simply do not vary much over four, five, or six years.

Given missing data on the year of adoption for three regulations and the lack of variation in some of the key independent variables, we treat the data as a single cross section, with most of the independent variables measured by 1997 and 1999 average values.[19] As figure 2 demonstrates, these are the years when most of the regulations were adopted. Regulation of managed care, although it began in 1994, was largely a phenomenon of the second half of the decade, exploding in 1997 when 103 instances of the regulations under study here were adopted. The following year, another 72 examples of the laws were enacted, with nearly 100 more to follow in 1999–2000; then legislative activity virtually ceased on these particular types of anti–managed care initiatives.

The independent variables are reported in table 2. We have used three measures of the ideological or partisan makeup of a state.[20] The first is

19. As a crude test of temporal variation in determinants, however, we performed separate analyses using the model presented here of only those policies adopted before 2000 and of those policies adopted during and after 2000 (in the latter case, given also the number of policies that had been adopted previously). The results were largely the same in these additional models as those presented in table 3 for all adoptions. The results were not strictly identical, however. That is, the role of advocacy organizations appears somewhat stronger among the early adoptions, while the role of political factors is somewhat stronger for the later adoptions. Given the rather artificial and arbitrary nature of this temporal split and the broad consistency of the results, we have opted to treat the whole period as a single cross section associated with a rapid policy diffusion process.

20. Somewhat surprisingly, the three measures are only weakly correlated with each other. The Ranney index is correlated at only the -0.01 level with opinion liberalism and at 0.12 with Democratic Party control. The opinion liberalism and Democratic Party control measures generated a correlation coefficient of only 0.21.

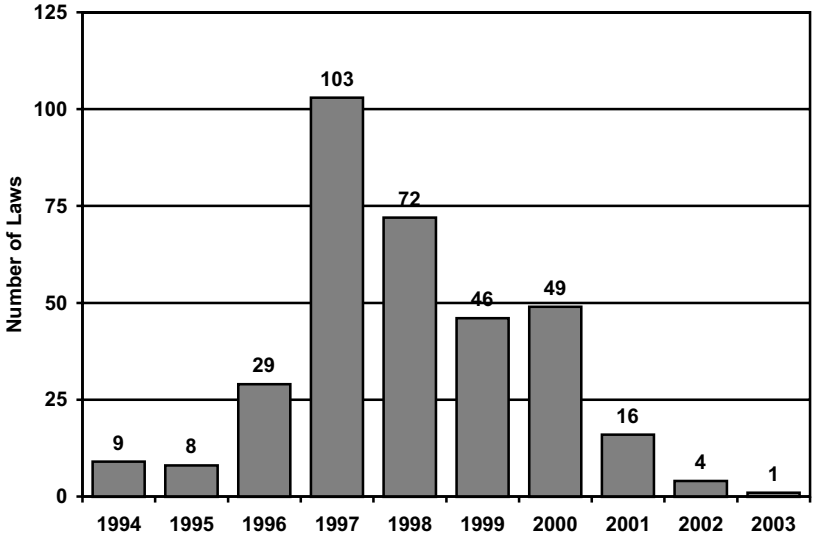

Figure 2 Number of Select Managed Care Laws Adopted by States, 1994–2003

party competition, measured by the average of folded Ranney indices for 1997 and 1999,[21] the standard measure of interparty competition at the state level. The Ranney index includes three components — the proportion of parties' success in the legislature and the governorship, their duration of success in each, and the frequency of divided control — and ranges from 0.500 to 1.000 (Bibby and Holbrook 2004: 87). Given our inverse coding of this variable, high values indicate one-party dominance, and low values indicate high levels of party competition. Therefore, we will refer to the measure as an indicator of one-party control from this point forward. The second political measure is the average of the 1997 and 1999 values of Erikson, Wright, and McIver's (1993) indicator of public opinion liberalism. This measure is widely used in political science literature and has been employed in health policy research as well (Kousser 2002; E. A. Miller 2006). The final political measure is the average of 1997 and 1999 values of Democratic Party control of state legislatures and governorships. States were coded 1 if Democrats controlled a legislative chamber or the

21. In order to preserve degrees of freedom, the fifty-state average was used for Nebraska and Nevada, two states with missing values on the Ranney index. The results do not change markedly, however, when these states are dropped.

Table 2 Independent Variables

Political Variables	
Party competition	Average of 1997 and 1999 folded Ranney indices
Opinion liberalism	Erikson, Wright, and McIver (1993) (www.php.iu.edu/~wright1/)
Democratic Party control	Average of 1997 and 1999 values of Democratic Party control of state house, senate, and governorship, each coded 1
Need Variables	
Health maintenance organization (HMO) penetration	Average of 1997 and 1999 proportion of populations enrolled in HMOs
Malpractice suit rate	Number of physician malpractice payments, annualized rate per 1,000 practitioners, September 1, 1990–December 31, 1996 (www.npdb-hipdb.com/pubs/stats/1996_NPDB_Annual_Report.pdf, accessed March 3, 2005)
Capacity Variables	
Administrative capacity	Governing.com ranking of administrative capacity of the states, 1999 (governing.com/gpp/2001/gp1glanc.htm)
State wealth	Average of 1997 and 1999 per capita gross state product
State economic size	Average of 1997 and 1999 gross state product
Interest Organization Variables	
Health advocacy proportion	Average of 1997 and 1999 proportions of all health guild lobby registrations by health advocacy organizations
Direct care provider proportion	Average of 1997 and 1999 proportions of all health guild lobby registrations by primary care clinic organizations
HMO proportion	Average of 1997 and 1999 proportions of all health guild lobby registrations by health maintenance organizations
Health business proportion	Average of 1997 and 1999 proportions of all health guild lobby registrations by insurance companies or associations, other health plans, and business health coalitions
Law proportion	Average of 1997 and 1999 proportions of all lobby registrations by legal organizations
Health proportion	Average of 1997 and 1999 proportions of all lobby registrations by health organizations

governorship with GOP control coded 0.[22] Within each year, these values were averaged across the political institutions to generate an overall indicator of Democratic Party control. More regulatory activity is expected in states with low levels of one-party dominance, more liberal electorates, and higher levels of Democratic control.

We employ two measures of the need for HMO regulation. The first taps HMO penetration of a state's health market as measured by the average of the 1997 and 1999 proportions of a state's population enrolled in HMOs. The second measure taps the rate of successful malpractice suits in the states. Ideally, we would employ some indicator of the rate of successful suits of HMOs in the period just prior to the adoption of the several regulations, but such data are not available. As a surrogate, we employ the number of malpractice payments (successful suits or settlements) per 1,000 medical practitioners in a state from September 1990 through 1996. While less than ideal, this measure highlights considerable variation across the states: Alabama had a low of only 6.87 payments, while Michigan had a high of 44.46 per 1,000 practitioners. This measure assumes, however, that the variation observed from 1990 through 1996 continued to characterize the states during the late 1990s.[23] This is not unreasonable given that this was precisely the time period during which public opinion turned on managed care. We expect that regulatory activity will be greater in states with higher rates of successful suits and more HMO penetration.[24]

We employ three measures of the states' regulatory capacity that are designed to capture both the expertise and fiscal resources recognized by bureaucracy scholars as aspects of capacity (see Eshbaugh-Soha and Meier 2004). The first is a measure of the administrative capacity of the states in 1999 developed by the Government Performance Project, a study conducted by the Maxwell School of Citizenship and Public Affairs and Governing (Barrett and Greene 1999). States were graded based on their management capacity in financial, capital, and human resources and their practices promoting management for results and the use of information technology. The "grades" were averaged to produce an overall grade ranging from an A to an F. These final grades were recoded running from a value of 5, for outstanding capacity, to 1, for a failing grade. Alabama had

22. The few cases of split party control were coded 0.50.

23. The mean was 21.44 with a standard deviation of 8.18.

24. The two measures, however, are only weakly and negatively correlated with each other (-0.16).

the lowest score of 1.5, while Missouri, Virginia, Utah, and Washington, with scores of 4.2, were judged to have the strongest administrative capacity. Our second measure of administrative capacity assumes that wealthier states can afford to invest more in their bureaucracies than poor states can. We measure state economic wealth by the average of 1997 and 1999 per capita gross state products (GSPs). And third, because there is considerable overhead in regulatory activity that should exhibit economies of scale, we also measure capacity by state economic size as indicated by the average of 1997 and 1999 GSPs. We expect regulatory activity to be greater in larger and wealthier states with high levels of administrative capacity.[25]

The final set of independent variables addresses our core concerns about organized interests. We employ several variables tapping the relative presence of organized interests on lobbying rolls that might influence the rate of adoption of HMO regulations. All are based on state lobby registration data collected by Gray and Lowery (1996) and recoded by Lowery et al. (2005). Lobby registrations, of course, are an indirect indicator of lobbying activity. Still, registering to lobby is the most basic form of lobbying participation and subsumes or precedes most other forms of influence activity, including participating in hearings, direct lobbying of legislators, or hiring contract lobbyists. Moreover, numbers of lobby registrations by different kinds of interest organizations are closely related to their use of these more direct kinds of influence activities (Tripathi, Ansolabehere, and Snyder 2002; Leech et al. 2005; Gray and Lowery 1997). Thus, variations in patterns of lobby registrations by organizations that would be plausibly supportive or opposed to HMO regulation should provide a valid—albeit indirect—indicator of the relative intensities of their lobbying. Indeed, lobbying on state health policies became much more intense throughout the 1990s. Fully 3,904, or 13.31 percent, of all registrations in 1990 were coded as having some health interest, broadly defined.[26] Registrations by health organizations increased to 5,678 and

25. The three measures are not strongly correlated. Gross state product (GSP) is correlated at the -0.02 level with administrative capacity and at the 0.27 level with per capita GSP, which has a 0.03 correlation with administrative capacity.

26. The procedures used to code the state lobby registration data have been described more fully elsewhere (Gray and Lowery 1996). Briefly, however, lobby registration lists were gathered by mail or Web site from state agencies responsible for their maintenance. After purging the lists of state agencies in states requiring their registration, organizations—rather than individual lobbyists—registered to lobby were coded by interest content (twenty-six guilds of substantive interests) using directories of organizations and associations and the Web pages of individual organizations. A second coder then examined the coding assignments with discrepancies resolved via discussion between the two coders. There was little difficulty in assigning

5,785 in 1997 and 1999, respectively, while their proportions of the total interest system grew to 16.74 percent and 17.50 percent, respectively.

Not all health interest organizations are concerned about the regulation of HMOs. Still, we examined a number of different coding schemes for eighteen finer categories of substantive health interests in the data.[27] These categories included both broad and narrow definitions of allies and enemies of regulation; we also experimented with including these in models separately and as ratios. In many cases, for reasons that are discussed below, these generated only very weak results. In the end, we adopted for inclusion in our estimating models only four measures of the relative presence of specific kinds of health interests within state interest systems—those tapping the specific kinds of interests noted by Brown (2001) based on his interviews from the second Community Tracking Study in 1998–1999. Two of the measures indicate the relative presence within health interest communities of two subguilds that would be expected to *favor* HMO regulation: health advocacy organizations (citizens' groups promoting consumers' interests) and direct care providers (independent clinics, medical groups, and individual medical practices of primary care physicians and specialists). These represent the interests of citizens and autonomous physicians, respectively. The relative presence of each is measured by the average of their 1997 and 1999 proportions of all health interest organizations. While there is considerable variation across the states, their average proportions during the two years was 1.43 percent (sd = 1.18) for independent care organizations and 10.57 percent (sd = 4.80) for advocacy groups.

Two types of health interest organizations were expected to *oppose* HMO regulation. The first, of course, are HMOs. The average proportion of 1997 and 1999 health guild lobby registrations representing HMOs was 7.74 (sd = 3.39). A second set of health interest organizations that would be expected to oppose regulation are health business interests including employer health plans, employer health coalitions, and insurance compa-

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most substantive codes. For example, only 1.58 percent of the 35,771 organizational lobby registrations in 1997 could not be coded by type or substantive interest. Fortunately, previous work indicates that the stringency of state lobbying registration requirements has little impact on the density (Lowery and Gray 1994, 1997) and diversity (Gray and Lowery 1998) of state interest communities.

27. For a more complete description of these coding categories, see Lowery et al. (2005). Only thirty-one organizations in the 1999 health population could not be so coded. The largest health subguilds, constituting half of all health registrations, were seven categories providing direct patient care.

nies. Together, these business interests comprised 5.91 percent (sd = 4.02) of health lobby registrations in 1997 and 1999. Interestingly, we can find few empirical studies that attempt to measure the interest group *opponents* of state health policy reform, whether it is a spending program or a regulatory program (although E. A. Miller [2006] is a welcome exception). Too many scholars are satisfied with measuring the existence or strength of the supporting coalition without putting effort into measuring the interest organizations on the other side. This is not satisfactory since policy outcomes are plausibly the result of the balance of interest group forces; the outcomes are not determined just by what advocates on one side of an issue might do. Our data set allows us to measure the opponents of regulation as well as its proponents.

We also include two other measures of the structure of the interest community that might plausibly influence HMO regulation; both of these are measured by the average proportions of the *entire* interest community in a state in 1997 and 1999 rather than just by the average proportions of the health guild per se. The first of these measures assesses the relative number of interest registrations by organizations representing lawyers, who might well prefer minimal regulation so as to protect a lucrative business in defending consumers through retail, case-by-case use of malpractice suits. The average proportion of all interest communities in the states during 1997 and 1997 was 2.16 percent (sd = 0.96). Moreover, to tap the gridlock that Gray and Lowery (1995) expected to be induced within crowded interest communities, the estimating models include the average of the 1997 and 1999 proportions of state interest communities comprised of health interest organizations (mean = 16.87, sd = 7.06).[28] We need to control for this phenomenon with a second measure, the general proportion of health interest organizations in state interest communities. Does it matter? The answer is yes. While their signs remain the same, the level of significance of both the HMO proportion estimate and the overall health proportion estimate decline quite a bit when either is excluded from the model. So, accounting for the gridlock effect is essential to assess the impact of specific sets of interests on the likelihood of a proposal passing or failing in a state legislature.

28. To some extent, the proportional measure of the size of the health guild taps relative rather than absolute numbers, which are the true focus of the gridlock hypothesis. Still, the model also includes GSP, which is strongly related to the number of lobbying organizations found in the states (Gray and Lowery 1996). This should partially control for absolute size and, thereby, allow our proportional or relative measure to tap the gridlock effect.

Those concerned about our use of proportional measures generally, the inclusion of specific proportions of four health interest groups as part of the health interest community, and the overall proportion of the health interest community as part of the entire state interest system should consider several issues. First, use of proportions is necessary because of potentially serious collinearity issues. That is, numbers of *all* interest organizations increase as states become larger. This means that including raw counts would lead to powerful correlations among all of the interest group measures. One way to avoid this is to examine proportions while controlling for state size, something we do with the GSP measure. This a common approach in the literature. Moreover, this really does solve the collinearity issue: once we shift to proportions, the sizes of these separate groups of organized interests are only weakly related to each other.[29] Also, the three specific types of health interest organizations that we examine are not a large part of the total health interest system. HMOs, on average, comprise only 7.74 percent of health interest communities. The comparable averages for the other specific interests we examine as proportions of state health interest communities — advocacy groups and organizations representing direct care providers — are only 10.57 percent and 1.42 percent, respectively. So we believe that the proportional nature of our interest group variables should not be a concern.

We have, then, six measures of the structure of the interest communities that are expected to influence levels of regulatory activity. Such activity should be suppressed when there is relatively greater representation by health business, HMO, and lawyer interests, as well as when interest systems are crowded. Greater relative representation by health advocacy and independent care provider interests should promote greater regulatory activity. In part, of course, this is a function of the fact that health interest communities are comprised of more than advocacy, business, direct care providers, and HMO interests; together, their average proportions of the health interest communities during 1997 and 1998 sum to only 25.65 percent. More substantively important, however, the weak correlations among these variables suggest that we are not seeing a simple pattern of mobilization and countermobilization whereby proposed legislation sim-

29. The proportion of the health interest community comprised of advocacy organizations is negatively correlated with all three other proportions: HMOs (-0.26), direct care provider organizations (-0.10), and health business organizations (-0.32). The correlations of the proportion of direct care provider registrants with HMO (-0.09) and health business interest registrants (0.26) are similarly small as is the correlation between the proportions of the health interest system comprised of health business interests and HMOs (0.22).

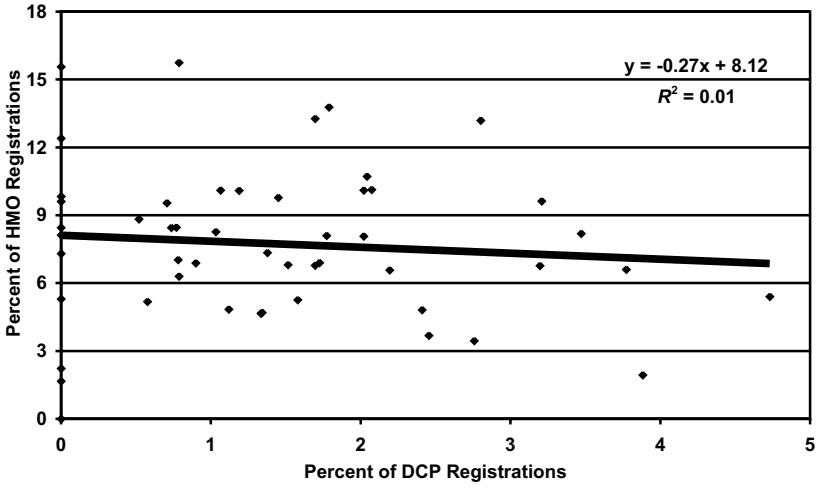

Figure 3 Scatter Diagram of the Proportion of Direct Care Provider (DCP) Registrations and Health Maintenance Organization (HMO) Registrations, 1997–1999

ply brings to the table more interests of all types (Lowery et al. 2005). To foreshadow an important part of our findings, for example, the correlation (-0.09) between the average of the 1997 and 1999 proportions of HMOs and direct care registrations is weak and incorrectly signed. Figure 3 demonstrates that, while there is considerable variation across the states in both proportions, these patterns of variation do not seem to be related to each other.[30]

Findings

The ordinary least squares (OLS) results using all four variants of our dependent variable are presented in table 3. All of the models generated strong coefficients of determination. Given the strong correlations among

30. Collinearity does not seem to be a serious problem in these analyses. We assessed collinearity by regressing each independent variable on the remaining independent variables. The resulting R^2 values were as follows: one party dominance (0.44), opinion liberalism (0.49), Democratic Party control (0.36), HMO penetration (0.62), malpractice suit rate (0.49), administrative capacity (0.19), state wealth (0.52), state economic size (0.68), health advocacy proportion (0.30), direct care provider proportion (0.39), HMO proportion (0.57), health business proportion (0.74), law proportion of all registrants (0.46), and health proportion of all registrants (0.42).

Table 3 Ordinary Least Squares (OLS) Tests of Determinants of Health Maintenance Organization (HMO) Regulation by States (n = 50)

	Dependent Variables			
	Unweighted		Weighted	
Independent Variables	Number of Provisions	Stringency of Provisions	Number of Provisions	Stringency of Provisions
Political Variables				
One-party dominance	–0.28**	–0.21**	–0.21*	–0.28**
	–2.20	–2.10	–1.41	–2.09
Opinion liberalism	0.14	0.15	0.15	0.15
	1.03	1.15	0.99	1.08
Democratic Party control	0.28**	0.21*	0.18*	0.25**
	2.33	1.83	1.33	1.99
Need Variables				
HMO penetration	0.06	0.04	0.10	–0.04
	0.39	0.28	0.55	–0.26
Malpractice suit rate	0.02	–0.07	–0.09	–0.02
	0.17	–0.51	–0.60	–0.17
Capacity Variables				
Administrative capacity	0.26**	0.28***	0.22*	0.25**
	2.22	2.47	1.61	1.98
State wealth	0.03	0.13	–0.06	0.12
	0.23	1.00	–0.40	0.84
State economic size	0.25*	0.21	0.22	0.25*
	1.46	1.31	1.11	1.39
Interest Organization Variables				
Health advocacy proportion	0.06	0.10	0.12	0.10
	0.55	0.94	0.95	0.81
Primary care proportion	0.26**	0.28**	0.26**	0.26**
	2.13	2.40	1.84	1.99
HMO proportion	0.36##	0.30##	0.27	0.33##
	2.43	2.16	1.64	2.14
Health business proportion	0.02	0.08	0.09	0.04
	0.10	0.44	0.44	0.19
Law proportion of all registrations	–0.20*	–0.10	–0.10	–0.13
	–1.54	–0.78	–0.68	–0.96
Health proportion of all registrations	–0.21*	–0.21**	–0.25**	–0.25**
	–1.67	–1.71	–1.74	–1.89
Constant	7.61	–6.75	14.86	–7.95
R^2	0.67	0.58	0.58	0.64

Note: Coefficients are standardized; the values beneath are *t*-values.

* = p < 0.10, ** = p < 0.05, ***=p < 0.01, one-tailed test; # = p < 0.10, ## = p < 0.05, two-tailed test

the four dependent variables, it is not surprising that the four models generate largely similar results. We will, therefore, discuss the estimates in blocks running across all four models. By far the weakest results are those generated for the *policy-need* variables measuring HMO penetration and the rate of malpractice suits. These estimates are incorrectly signed in four of eight cases, and in no case is the estimate larger than its standard error. The rush to regulate HMOs does not seem to be related to either their penetration of health markets or to the rate of malpractice suits and settlements.[31] Evidently, state lawmakers did not respond to consumers' fears about HMOs based on their exposure to them in the marketplace or upon the successful prosecution of malpractice in the state.

Somewhat more positive results are generated for the *capacity* variables. We hypothesized that states would be more likely to regulate if they had a stronger capacity to do so. The estimates of two of the three capacity indicators — administrative capacity and economic size — generate the expected positive estimates. Administrative capacity is significant at the 0.01, 0.05, or 0.10 level, depending upon the dependent variable, while state economic size's significance does not exceed 0.10 across the dependent variables. In contrast, none of the state wealth estimates are discernibly different from 0. Still, it seems that large states with strong administrative systems according to national standards were more likely to regulate HMOs.

Strong results are also generated for two of three *political* variables. All four of the one-party dominance estimates are signed as expected and are significantly different from 0 at the 0.05 level in three cases and at the 0.10 level in one case, indicating that regulatory activity was greater in states with more competitive party systems. Policymakers are more likely to be responsive to consumers' demands for regulation under conditions of close contestation between the parties. Moreover, all four of the Democratic Party control estimates are significant and positive, two at the 0.05 level and two at the 0.10 level, indicating that states under Democratic Party control adopted more regulations of all types, more stringent regulations, and substantively more important regulations.

However, none of the opinion liberalism estimates, while correctly signed to suggest that more liberal states have higher levels of regulatory activity, generate discernible estimates. This result is contrary to what many scholars have found in studies of other areas of health policy. We are

31. We also examined a range of interactions among the policy-need and political variables to little effect.

not yet ready, however, to rule out the possibility that opinion liberalism is related to regulatory activity. That is, the *t*-values of all of the opinion liberalism estimates are close to 1.00. More telling, and despite the weakness of the relationship between Democratic Party control and opinion liberalism, the estimates for the latter remain positive and are significant at the 0.10 level when the former is excluded from the model. The more general conclusion, however, is that party competition and Democratic Party control clearly did influence levels of HMO regulatory activity.

What of *interest organizations*? As noted earlier, our search for patterns of evidence that indicated interest influence on levels of state regulatory activity extended far beyond the specific measures reported in table 2. We examined many different configurations of interest organization variables in our search for significant effects. These largely generated null results. One consistent effect observed across all of these models concerned the gridlock hypothesis. The consistently negative and highly significant estimates (three at the 0.05 level and one at the 0.10 level) at the bottom of table 3 reflect this more general pattern: having an interest system comprised of a greater proportion of health lobby registrants depresses regulatory activity in terms of adoptions and stringency of rules adopted. The second consistent effect observed among the interest group variables in table 3 is that all of the direct provider estimates are positively signed and significant at the 0.05 level. When relatively more independent direct care organizations lobby, states respond by enacting more regulations, more stringent ones, and more important ones. Brown (2001) seems to have been right about provider dominance. Our results indicate that when physicians organize, they are able to get more anti–managed care regulations enacted.

Beyond this, evidence of interest group influence is mixed. As expected, the health advocacy estimates are consistently positive; however, none are significant. The weak results for advocacy groups are especially surprising given the strong expectations of Brown (2001), based on twelve case studies of regulatory reform. One possibility is that the influence of citizens' groups is lost in the glare of the political variables. That is, liberal and Democratic politicians might well be expected to be attentive to such organizations so that the influence of the latter is expressed *through* the presence of the former. However, the advocacy coefficients remain extremely small when the three political-electoral variables are dropped; all else remains as reported in table 3. The law coefficients are consistently negative as predicted. However, only one of the latter is significant and then only at the 0.10 level.

In contrast, all eight estimates for the HMO and health business proportion measures are incorrectly signed, and three of the former would be significant if two-tailed tests were employed, with the remaining estimate generating a sizable *t*-value of 1.64. It seems, then, that a greater relative presence on the part of interests expected to oppose HMO regulation actually promoted greater regulation. Obviously, this is a puzzle that we must return to in the conclusion of the paper. For now, though, it is worth noting that these counterintuitive positive estimates largely account for the failure of our other approaches (results not shown here) to assess how configurations of allies and enemies influenced HMO regulatory activity. That is, at least in terms of any kind of consistent effect associated with relative numbers of lobby registrations, there do not seem to have been many effective opponents of reform. Again, however, we will return to this issue in the conclusion.

Before doing so, it is worth considering the substantive impact of the two health organized interest variables for which some evidence of impact were generated—the proportion of the health community comprised of independent care organizations and HMOs (albeit in the wrong direction for the latter). The estimates in table 3 are standardized. Thus, we can at least to some extent compare the effects of the several classes of variables we have examined. The coefficient estimates for the HMO and independent care lobby registration variables range from 0.26 to 0.33, in almost all cases as large as or greater than the estimates for the Democratic Party control, party competition, and administrative capacity variables.[32] Thus, the impact of these two subguilds of health interest organizations is substantively sizeable. When taken in conjunction with the strong results generated for the variables tapping partisan control and competition and the very weak results generated for the measures of policy need, it is clear that politics—broadly construed—played a significant role in state adoption of HMO regulations.

32. This strong result may seem especially surprising given the small number of direct care organizations involved. To some extent, however, we expect that the provider numbers represent a larger presence by independent direct care providers. We estimated a number of models, including all direct care registrants in combination and separately, to tease out this larger effect. Results are largely consistent, if somewhat weaker, than those presented here for independent care organizations. However, given the obvious policy conflicts between HMOs and independent care organizations, we opted for the narrower measure.

Conclusion

If politics, not need, largely determined how active states were in regulating managed care organizations during the late 1990s, how are we to understand the nature of that politics? Our results, while quite consistent across the several measures of regulatory activity, leave us with two interesting puzzles. The first and most obvious concerns the role of different types of interest organizations.

As predicted, at the level of the interest population, having more organizations involved in health policy clearly promoted gridlock and depressed the states' ability to regulate managed care, just as a profusion of similar interest organizations has stymied the U.S. Congress in their attempts to enact patient protection legislation for more than a decade. The major interest group able to push managed care legislation through state legislatures seems to have been physicians, measured in this analysis by representation of independent direct care providers. This was the only group of proponents consistently demonstrating significant impact across all dependent variables. Our results for a set of important anti–managed care regulations thus demonstrate the political clout of providers at the state level that Brown and Eagan (2004) found in their analyses. Their discussion stressed that providers' success often depends upon the strength of their consumer allies (a result that we did not find) and upon the strength and countermobilization of groups, such as health plans and business interests, that oppose regulations.

For the most part, our results show that likely opponents of regulation of managed care — insurance companies, business coalitions, and lawyers — were not effective, statistically speaking, in deterring the passage of anti–managed care legislation. However, the finding that relatively greater HMO representation would result in more, not less, regulation of the managed care industry is puzzling and deserves some explanation on our part. While having more interests involved in health policy clearly promotes gridlock and depresses regulation of managed care, the evidence we have generated on different relative configurations of health interests is, at least in part, surprising. That is, while we expected that a health interest system with relatively greater representation by independent care providers would be more likely to regulate HMOs, it is not at all obvious that having greater relative HMO representation would work in the same manner.

At least three explanations might be offered to explain this surprising finding. We have already explored the first to some extent in our discussion

of figure 3. That is, it does not seem that the surprising positive estimates for HMO registrations are a function of mobilization and countermobilization whereby prospective managed care legislation brought out more lobbying organizations of all stripes. If this were true, then the positive estimates for HMO registrants would be evidence of extensive—if unsuccessful—opposition to regulation by the states. We have seen, however, that greater relative representation by primary care providers is not associated with greater relative representation by HMOs (Lowery et al. 2005). Thus, it does not seem that we account for the puzzlingly positive HMO estimates in this manner.

A second explanation would invoke Stigler's (1971) and Peltzman's (1976) assertion that regulation is usually provided at the behest of those who are regulated. That is, the positive estimates for HMO representation may really reflect the efforts of allies rather than of enemies of reform. We do not find that explanation plausible for two reasons. First, if this explanation were valid, it would only shift the focus of our examination from the surprising HMO coefficients to the estimates for the proportion of the health interest community comprised of independent care organizations. That is, if regulatory "reforms" were actually supportive of HMOs from the start, then why did the primary care variable generate *positive* and highly significant estimates? Why would independent doctors have supported greater regulation? Second, and more importantly, we have seen little evidence to suggest that HMOs looked favorably upon regulations of the type included in our dependent variables. A look at the Web site of the American Association of Health Plans (AAHP), managed care's trade organization, shows just the opposite. There, one can find a report titled "Health Plan Liability: What You Need to Know" (AAHP 2001). The thrust of the report is that expanded health plan liability will diminish the quality of medical care and substantially add to health care costs. Alternately, one can read a summary of a study on why health care costs have risen; it attributes half the increase in costs to government regulation, runaway litigation, and increased bargaining power resulting from provider consolidations (AAHP 2002).

A third possible explanation for our puzzling findings is that HMOs, facing a tsunami of political pressure in support of regulation and having a host of other—often more important—issues on the health policy agenda, opted to go along with reform, perhaps participating in the expansion of regulatory supervision so as to diminish its negative consequences for their businesses. This explanation has a little more resonance in that

Brown and Eagan (2004) noted instances in California and Massachusetts in which HMOs were motivated to bargain constructively over regulations because they were fighting off more threatening ballot initiatives at the time. Moreover, when HMOs choose to negotiate behind closed doors, they often find state lawmakers ready to deal; lawmakers do not want to destroy their relationship with the interest group that brought cost savings to the state employees' health plan or to many corporate health plans. This explanation seems more likely to us than the first two possibilities.

Even if we solve the specific puzzle of interpreting the HMO findings, our results leave us with an even larger conundrum of understanding the meaning of the strong role we have found for politics, again broadly construed, in the wave of regulatory reforms brought to bear on managed care organizations during the last years of the 1990s. Simply put, does this strong role for politics represent political pandering by officials to public opinion and/or interest organizations representing physicians? Or is this a case of democratic responsiveness? Obviously, our results cannot really answer these questions. Indeed, political pandering to one person may well constitute necessary democratic responsiveness to another. This is, however, still an especially interesting question given the weak results reported for the policy-need variables. That is, while policy need, in the form of concern about malpractice issues and the extent of HMO penetration within health markets, may well have been the impetus for regulatory reform, the two seem to have dissociated once managed care regulation became a popular political issue. This at least raises the possibility of political pandering. In other words, once HMO regulation became popular, it may have become a bandwagon upon which all too many decided to leap for relatively little policy purpose. Brown and Eagan (2004: 1057) at least hint at this possibility in the passage of external review laws that were "advanced by political leaders seeking to stay on the right side of constituents and broader public opinion." In this sense, the adoption of HMO regulations during the late 1990s and the rapid diffusion of these regulations' more symbolic cousin, the "patients' bill of rights," may resemble more the kind of democratic frenzy or bandwagon effect associated with the rapid diffusion of tax-cut proposals during the era of the tax revolt (Sigelman, Lowery, and Smith 1983; Mahoney 2003) than they do "normal" policy politics observed with other kinds of health policy issues during the same time period (Gray, Lowery, and Godwin 2007).

Appendix: Data Sources for Dependent Variables

Access to Ob-Gyns

Kaiser Family Foundation. 2004. State Mandated Benefits: Direct Access to OB/Gyns, 2004. statehealthfacts.org (accessed January 8, 2007).

Any Willing Provider

Health Policy Tracking Service. 2003. Any Willing Provider. Issue Brief, Year End Report. December 31.

Bans on Provider Financial Incentives

Health Policy Tracking Service. 2003. Bans on Financial Incentives. Issue Brief, Year End Report. December 31.

Continuity of Care

Health Policy Tracking Service. 2003. Continuity of Care. Issue Brief, Year End Report. December 31.

External Review Requirements

Health Policy Tracking Service. 2003. Consumer Grievance Procedures: Internal and Independent Appeals. Issue Brief, Year End Report. December 31.

Gag Bans

Health Policy Tracking Service. 2003. Bans on Gag Clauses. Issue Brief, Year End Report, December 31.

Internal Review

Health Policy Tracking Service. 2003. Consumer Grievance Procedures: Internal and Independent Appeals. Issue Brief, Year End Report.

Liability Regulations

National Council of State Legislatures (NCSL). n.d. Managed Care Insurer Liability. www.ncsl.org/programs/health/liable.htm (accessed March 12, 2002).

Ombudsmen and Report Cards

NCSL. n.d. Managed Care Insurer State Laws for Ombudsman, Report Cards and Provider Profiles. www.ncsl.org/programs/health/hmorep2.htm (accessed May 12, 2004).

Standing Referral to Specialists

Kaiser Family Foundation. 2004. Patients' Rights: Standing Referrals for Ongoing Care with a Specialist, 2004. statehealthfacts.org (accessed January 8, 2007).

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