CHANGE AND GROWTH IN MANAGED CARE

by Elizabeth W. Hoy, Richard E. Curtis, and Thomas Rice

Prologue: One of the most rapidly growing segments of the managed health care market is the insurer-owned managed care plan. Although health maintenance organizations (HMOs) and other managed care plans have existed for decades, their association with commercial insurers has shifted from being direct competitors to being one of several lines of insurers’ business. Many insurers have staked the future of their business on managed care; new data from the Health Insurance Association of America (HIAA) show that from 1982 to 1990, managed care grew from less than 1 percent to more than 25 percent of all HIAA member business. These data come from the HIAA Managed care Survey, a biannual survey of all HIAA-member insurance companies. Here, Elizabeth Hoy, Rick Curtis, and Tom Rice examine and analyze these data and their implications for the future of managed care. According to their analysis, nearly half of these insurers now offer some sort of managed care product. This portion of their business is growing, as their conventional insurance market is shrinking (although, the authors state, conventional insurance is still the norm). It seems obvious that insurers will continue to develop and refine their managed care products, in response to employers’ demand for them. Hoy, who received her master of health administration degree from the University of Washington, Seattle, is a senior policy analyst in HIAA’s Department of Policy Development and Research. Curtis, who came to HIAA three years ago after founding the National Academy for State Health Policy, is director of that department. He received a master’s degree in public policy from the University of Michigan. Rice, who is an associate professor at the School of Public Health, University of California, Los Angeles, received a doctoral degree in economics from the University of California, Berkeley.
Employers have embraced managed care to slow the rapid increases in spending for employee health care benefits. As a consequence, managed care has grown rapidly and constitutes an increasing share of private insurers’ health coverage. This essay examines the structure and characteristics of the network-based managed care plans offered by commercial insurers. We further examine current developments within a subset of “trend-setting” insurers—carriers that have made a significant commitment to offering a broad range of managed care products.

Most of the data presented here are from the 1990 Health Insurance Association of America (HIAA) Managed Care Survey. This telephone survey questions a sample of HIAA member insurers concerning the extent, structure, and characteristics of their managed care products. The sample includes all member insurers known to offer a managed care product and a random sample of all other member insurers. Similar surveys were conducted in 1988 and 1986. Where possible, we present trend data from the previous surveys; however, the survey instrument and analytic methodology were revised substantially for the 1990 survey, and direct comparison of trends is not always possible.

We define network-based managed care plans as those that integrate the financing and delivery of appropriate health care services to covered individuals by means of the following four basic elements: (1) arrangements with selected providers to furnish a comprehensive set of health care services to members; (2) explicit standards for the selection of health care providers; (3) formal programs for ongoing quality assurance and utilization review; and (4) significant financial incentives for members to use providers and procedures associated with the plan.

In 1990, 38 percent of employees nationwide were enrolled in network-based managed care plans—up from 27 percent in 1987. Over the same period, employee health coverage in “unmanaged” conventional plans declined from 41 percent to only 5 percent (Exhibit 1). Major employers

| Exhibit 1 |

<table>
<thead>
<tr>
<th>Type of plan</th>
<th>1987</th>
<th>1988</th>
<th>1989</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional without utilization management</td>
<td>41%</td>
<td>28%</td>
<td>18%</td>
<td>5%</td>
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<tr>
<td>Conventional with utilization management</td>
<td>43%</td>
<td>49%</td>
<td>57%</td>
<td></td>
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<tr>
<td>Health maintenance organization</td>
<td>16%</td>
<td>18%</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>Preferred provider organization</td>
<td>11%</td>
<td>11%</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Point-of-service plan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5%</td>
</tr>
<tr>
<td>Total network-based managed care</td>
<td>27%</td>
<td>29%</td>
<td>33%</td>
<td>38%</td>
</tr>
<tr>
<td>Total nonnetwork plans</td>
<td>73%</td>
<td>71%</td>
<td>67%</td>
<td>62%</td>
</tr>
</tbody>
</table>

continue to express strong support for managed care; 65 percent of senior
executives surveyed in May/June 1991 believed that managed care is
effective at containing costs.

Many industry observers look to the premium increases experienced
by employers for evidence of the effectiveness of managed care. Employers
responding to HIAA’s Annual Employer Survey reported that the overall
rate of increase of premiums is slightly lower for managed care plans than
for conventional plans and that premium increases for all types of plans
are slowing somewhat (Exhibit 2). However, we have found inconsis-
tency in comparative trends within our own and in external data sources.
This disparity is largely due to differing methodological approaches.
HIAA is currently working with RAND Corporation researchers to
understand the differences and delineate appropriate approaches.

Employer survey data such as these are not a reliable means to evaluate
the cost-effectiveness of managed care; they also tend to reflect mar-
etwide averages and not the significant underlying variation in some
segments of the market. For example, certain carriers with extensive
managed care experience assert that their managed care plans experience
much lower premium increases than their traditional indemnity plans
experience. Further, recent research indicates that in localities where
HMOs and other plans using selective contracting hold greater market
share, the rate of increase in total hospital costs per admission and the
trend in “cost shift” to the private sector is lower than in other areas.
Ultimately, the only way to measure the performance of differing models
of managed care accurately is through rigorous research that controls for
benefit plan design, geographic variation, and (to the extent possible)
selection bias.

Health maintenance organizations (HMOs) and preferred provider
organizations (PPOs) are the predominant models for managed care. In
1990, more than 33.6 million Americans were enrolled in 556 closed-
panel HMOs, and another 1.04 million were enrolled in 96 open-ended
HMOs, in which enrollees receive some reimbursement for services

| Exhibit 2 | Employer-Reported Percentage Premium Increases, By Plan Type, 1989–1991 |
|-----------|------------------|------------------|------------------|
| Plan type | 1989  | 1990  | 1991  |
| Conventional | 20%  | 17%  | 14%  |
| HMO a | 16  | 16  | 13  |
| PPO b | 18  | 15  | 13  |
| All plans | 18  | 16  | 14  |

aHealth maintenance organization.
bPreferred provider organization.
received from non-network providers.\textsuperscript{5} Enrollment growth in closed-panel HMOs grew an average of 14 percent per year from 1980 to 1990, peaking at 25 percent per year in the mid-1980s and falling to less than 5 percent per year for the last two years. By contrast, the growth in open-ended HMO options was 46 percent in 1989 and 48 percent in 1990.\textsuperscript{6}

In addition to HMO enrollment, over thirty-eight million individuals were eligible to use PPOs in 1990. PPO enrollment nationwide has grown at an average annual rate of 46 percent, consistent with that of open-ended HMO plans. Forty-four percent of PPOs are owned by insurers.\textsuperscript{7}

Commercial insurers and Blue Cross/Blue Shield plans are the primary sponsors of employer-based conventional and PPO coverage, with 60 percent of conventional coverage and 70 percent of PPO coverage. It is not known what proportion of employer-based HMO coverage is sponsored by private insurers; however, private insurers owned 43 percent of HMOs nationwide and enrolled 27.2 percent of HMO enrollees in 1990.\textsuperscript{8}

Because 90 percent of commercial health insurance is employer-based, it is not surprising to find insurers reconfiguring their product lines around managed care. HIAA’s 1990 Managed Care Survey shows that the number of HIAA-member commercial insurers offering HMO and/or PPO products grew substantially during 1988–1990. Of 185 HIAA-member parent companies, 94 offer either HMOs, PPOs, or both products. Carriers that offer HMO products grew from twenty-one in 1988 to twenty-six in 1990 (a 24 percent increase); during the same period, the number of insurers that offer PPO products grew from seventy to eighty-five (a 21 percent increase).\textsuperscript{9} Ten percent of HIAA members offer both HMO and PPO products.

In contrast to managed care growth, the number of HIAA-member commercial insurers offering conventional group health insurance declined 18 percent, from 134 insurers in 1988 to 110 in 1990. This was due to continued consolidation within the industry and the exit of some insurers from the group health market. Of thirty-four firm entries and product introductions to the health insurance market catalogued from The National Underwriter: Life and Health Edition between January 1984 and December 1989, approximately half were network-based managed care firms or products, one-fourth were conventional insurance products, and one-fourth were other products, such as long-term care. Most firm exits and product discontinuances represented mergers and consolidations within the managed care industry (44 percent), followed by exit of conventional insurers (32 percent), consolidation of conventional insurers (16 percent), and exit of managed care firms (8 percent).\textsuperscript{10}

While conventional insurance is still the norm, managed care now
comprises a substantial, and rapidly growing, share of all commercial insurance premium revenue. Since 1982, managed care has grown from less than 1 percent to approximately one-fourth of group health premium revenues (Exhibit 3). Less than 2 percent of individual premium revenue is from network-based managed care plans.

Range Of Approaches To Managed Care

Current managed care plans include diverse combinations of organizational and operational characteristics, such as provider reimbursement strategies, utilization management and quality assurance techniques, and provider selection and contracting criteria. Many recent plan innovations have developed from attempts to integrate both cost control and freedom of choice for enrollees.

**HMOs and PPOs.** More than two-thirds of the total enrollment in commercial insurers' managed care plans is in PPOs. Insurer-sponsored PPO enrollment has increased 37 percent since 1988, from 13 million to 17.8 million enrollees. Of the 8.3 million enrollees in insurer-sponsored HMOs, 67 percent are enrolled in individual practice association (IPA) plans, 22 percent are enrolled in group-model plans, and only 9 percent are enrolled in staff-model HMOs (Exhibit 4).

Though overall enrollment in insurer-sponsored HMOs remained stable from 1988 to 1990, there were substantial changes in the size and

Exhibit 3
Growth Of Managed Care In The Commercial Health Insurance Industry, 1982–1990

<table>
<thead>
<tr>
<th>Year</th>
<th>PPO</th>
<th>HMO</th>
</tr>
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<tbody>
<tr>
<td>1982</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>1984</td>
<td>0.9</td>
<td>8.9</td>
</tr>
<tr>
<td>1986</td>
<td>8.9</td>
<td>18.9</td>
</tr>
<tr>
<td>1988</td>
<td>18.9</td>
<td>25.3</td>
</tr>
<tr>
<td>1990</td>
<td>25.3</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Source: HIAA Managed Care Survey, 1990.
composition of individual insurers managed care product lines during this period. This led to a dramatic decline in the percentage of enrollees in staff-model HMOs and a corresponding increase in group-model and mixed-model HMOs within insurer-sponsored HMOs. One large carrier—already heavily invested in group-model HMOs—quadrupled its managed care premium, three other large carriers acquired one or more group-model HMOs, and the largest owner of staff-model HMOs converted some staff-model HMOs to mixed-model HMOs and acquired other group-model HMOs. These changes are probably due to the limited capacity for growth in staff-model HMOs and the greater organizational controls of group-model HMOs as opposed to IPA-model HMOs. Other data for the same time period indicate that enrollment in staff-model and IPA-model HMOs declined slightly for the HMO industry as a whole, while enrollment in group-model, network-model, and mixed-model HMOs grew correspondingly.\textsuperscript{11}

Single-Service products. Fifty-five percent of insurers offering HMOs and 13 percent of insurers offering PPOs also offer at least one single-service managed care product, such as dental, psychiatric, or substance abuse services. This represents a decline from 1988, when 62 percent of insurers offering HMOs and 25 percent of insurers offering PPOs sponsored single-service managed care products. The majority (51 percent) of single-service HMO networks offer prepaid dental services, followed by psychiatric and substance abuse and vision care (Exhibit 5). For PPO plans, these single-service networks are predominantly psychiatric and substance abuse plans (59 percent). It is interesting to note that for insurers who offer PPOs, tertiary care ranked second to psychiatric and
substance abuse services. This points to an overall trend toward contracting selectively with specialty centers for complex and expensive procedures, such as organ transplants and cardiac bypass surgery.

**Point-of-service products.** The most recent development in managed care is the point-of-service plan. It encompasses characteristics of both HMOs and PPOs in an attempt to balance demands for cost containment and freedom of choice. Point-of-service plans use a network of contracted providers, and enrollees select a primary care physician gatekeeper who controls specialty referrals. If an enrollee receives care from a network provider, the enrollee pays little or nothing out of pocket. Care provided by out-of-plan providers is reimbursed, but with significantly higher enrollee cost sharing. Providers may be reimbursed on either a capitated or fee-for-service basis; however, there are usually financial incentives for providers, to inhibit out-of-network use.

Nine survey respondents, representing 45 percent of the total premium revenue for HIAA member companies, offer at least one point-of-service plan. In the summer of 1990, slightly more than 3,000 contracts and 1.8 million enrollees (7 percent of total managed care enrollment) were covered under point-of-service plans.

Respondents with HMOs were surveyed about the benefit design of point-of-service plans. All indicated that enrollees in these plans can choose a non-network provider at any time. However, in all of the plans, out-of-plan use is subject to an additional copayment; half require that enrollees also pay a deductible. The maximum out-of-pocket payment for enrollees in these plans ranges from $500 to $7,500, with the average out-of-pocket limit set at $3,000.

This description of a new and rapidly evolving phenomenon is based
on very limited data. We anticipate that significantly more information will be available from future surveys, since 78 percent of insurers that offer HMOs indicate that they anticipate offering a point-of-service option in the near future. The characteristics of point-of-service plans are likely to change markedly over time, as new organizational structures and administrative procedures are developed to accommodate the complex characteristics of these plans.

**Characteristics Of Managed Care Approaches**

Providers networks. The existence of provider networks differentiates managed care plans from conventional insurance. Managed care plans attempt to influence utilization through selecting providers with cost-effective practice patterns and channeling enrollees to them. The HIAA Managed Care Survey included questions concerning provider networks in both HMOs and PPOs. However, it should be noted that insurers offering multiple managed care product lines do not usually administer distinct networks for each one. Typically, an insurer will have agreements with a core of providers who participate in more than one type of managed care plan for that insurer.

Insurers can develop a network through contracting directly with providers, purchasing another organization with a network already in place, or renting access to an existing network. Building a network is highly resource-intensive; some carriers have reported investments of hundreds of millions of dollars. Renting a network provides faster, less-risky entry into the managed care market. Generally, to rent a network, an insurer pays the network organization an access fee based on the insurer’s volume. The insurer continues to provide administrative services, such as claims payment and utilization management. Seventy-seven percent of insurers offering PPOs (representing 60 percent of PPO premiums) rent one or more PPO networks, and 18.7 percent (representing 20.1 percent of PPO premiums) rent their networks to others.

A middle ground between building and renting networks also exists. Consortia of health insurers pool their resources to build networks in selected geographic areas. An example of this is the insurer consortium that develops networks through Private Health Care Systems, headquartered in Lexington, Massachusetts. As shareholders in the organization responsible for network administration, consortium members have greater control over the selection of providers than they would if they rented. Further, the pooled market share of the consortium enhances insurers’ ability to contract with providers. Consortium members continue to compete with each other through benefit design and premiums.
Insurers’ HMOs, which incorporate risk-sharing agreements with providers, are far less likely than PPOs to rent their networks. Only 3.9 percent of insurers offering HMOs (representing less than 1 percent of all HMO premiums) reported renting their networks from other HMOs, and only 5.1 percent (representing 3.7 percent of total HMO premiums) reported that they are willing to rent their HMO network to others.

Provider reimbursement. Managed care reimbursement strategies range from paying billed charges to negotiating reimbursement mechanisms that shift almost all financial risk for variance in use to providers, such as diagnosis-related group (DRG) payments and capitation. An insurer’s choice of reimbursement method depends on the organizational structure of the managed care plan, the market characteristics of the geographic area, the utilization management techniques associated with the plan, and the insurer’s philosophy of provider risk sharing.

Insurers are most likely to use discounted usual, customary, and reasonable (UCR) charges as their principal hospital reimbursement mechanism in both HMOs and PPOs (Exhibit 6). HMOs are strongly oriented to this approach; discounted UCR was the primary method of reimbursing hospitals for 71 percent of the HMO market, versus 35 percent of PPOs. PPO insurers reported hospital discounts ranging from 4 percent to 30 percent, with a median estimated discount of 16 percent.

More insurers’ PPO plans than HMO plans reported that per diem arrangements (wherein hospitals are paid a fixed amount per day, regardless of the type and amount of ancillary services used) are their principal means of reimbursing hospitals. Per diem payments provide incentives to reduce the number of services in the hospital but not to reduce length-

Exhibit 6
Principal Method Of Reimbursing Hospitals, HMO And PPO Plans, 1990

Source: HIAA Managed Care Survey, 1990.

*Diagnosis-related group.
of stay. Both HMOs and PPOs appear to be moving away from using per diem payments as the principal means of reimbursing hospitals. PPOs primarily using this method fell from about four in ten in 1986 to about one in four in 1990. In HMOs, the use of per diem payments has declined more dramatically, although the numbers are less reliable due to changes in question wording in all three years of the survey.

Insurers whose PPOs primarily reimburse according to billed charges grew from virtually zero to almost 20 percent during the same period. Alternatively, use of DRG payments in PPOs and DRGs and capitation in HMOs increased somewhat during this period, although not enough to compensate for the decline in per diem payments. Both reimbursement methods include more stringent risk sharing than per diem payments.

These trends appear to hold true back to 1986; however, because of differences in question structure and statistical weighting, the exact magnitude of the trend cannot be measured. In general, HMOs appear to be less oriented toward hospital risk sharing than PPOs are. It may be that the use of primary care physician gatekeepers and a strong orientation to avoid hospitalization in HMOs make hospital risk sharing less critical. However, larger physician networks may also give PPOs greater negotiating leverage with hospitals. The increase in reimbursement based on billed charges may reflect the development of “second-generation” PPOs, which rely more heavily on selection of providers and utilization review than on price discounts to achieve cost savings.

Physician risk sharing has traditionally been a hallmark of HMOs and a distinguishing characteristic between PPOs and HMOs. In general, HMOs require physicians to bear financial risk for utilization, and PPOs do not. Insurers representing almost 82 percent of the insurer-sponsored PPO market reported that discounted UCR charges are the most common means of reimbursing primary care physicians, where the majority of the insurer-sponsored HMO market uses fee schedules (Exhibit 7). PPOs do not appear to vary their preferred method of reimbursement between specialists and primary care physicians, while HMOs split more evenly among discounted UCR charges, fee schedules, and capitation to reimburse specialists (Exhibit 8).

Utilization management. Utilization management programs prospectively and concurrently assess the appropriateness of care and the site in which care is delivered to control costs and to improve quality. Utilization management techniques are used far more extensively in managed care plans than in conventional insurance plans.

The 1990 survey asked respondents about utilization management activities in conventional group insurance and PPOs; the 1992 survey will also explore such activities in HMOs. These figures illustrate the
degree to which insurers perform utilization management for a specified product line, and not necessarily the percentage of each product line incorporating utilization management. For many employers with conventional insurance, utilization management services are provided by an independent utilization review firm.

Precertification, concurrent review, and discharge planning—programs designed to reduce unnecessary use of inpatient services—are virtually universal in PPOs (98 percent, 97 percent, and 87 percent of PPO business, respectively). In contrast, insurers provide these services for slightly less than two-thirds of their conventional group health business. PPO enrollees are also more likely to be subject to a mandatory second opinion program than are those covered under conventional insurance (58 percent versus 40 percent). In all cases, both PPOs and conventional plans reported that requirements for second surgical opinion will be waived if clinical guidelines indicate that surgery is necessary.

High-cost case management programs are used extensively in both conventional group health insurance (77 percent) and PPOs (95 percent). PPOs tend to apply high-cost case management to a wider set of circumstances than conventional plans do; for example, PPOs are more likely to apply case management to cases involving mental health, substance abuse, and other chronic illnesses. Approximately 60 percent of insurers reported that they use a combination of diagnosis and a minimum dollar threshold of submitted claims to identify potential
candidates for case management, while approximately 30 percent use only diagnosis to initiate case management review. Insurers prefer diagnosis-oriented prompts rather than claims thresholds alone, since the former can be integrated into prospective utilization review activities and enable case management to intervene earlier in the course of treatment.

Managed care plans also reported that they create profiles of physicians’ practice patterns to provide feedback to the network providers; insurers representing 96 percent of the PPO market reported that they maintain physician profiles. These profiles are typically provided to plan medical directors, who use the information to educate those providers with divergent patterns. Large amounts of claims and administrative data are required to create adequate profiles on individual physicians. Thus, many PPOs may not be able to create detailed profiles on a majority of the physicians in any single network.

Trend-Setting Managed Care Plans

To further refine our understanding of the current and future characteristics of insurer-sponsored managed care, we split the survey respondents into two groups. The first was a group of “trend-setting” managed care insurers: carriers with a broad range of managed care experience who have moved a significant proportion of their group business into managed care. They own both HMOs and PPOs; each carrier’s managed care premium revenue was either more than 50 percent of all group business
or more than $200 million in 1990; and they own at least one group- or staff-model HMO. All other survey respondents were placed into the comparison group.

**Managed care product lines.** As a group, the nine trend-setting insurers represent 62 percent of all managed care premium revenue and a majority of group health premium revenue (65 percent) for HIAA members. They range in size from $38 million to over $11 billion in total premium revenue. The trendsetters earned 86 percent of HMO premium revenue and 55 percent of PPO premium revenue. Of the fifty-one insurers in the comparison group, one offers HMO products only, forty-one offer PPO products only, and nine offer both products.

The two groups do not differ much in the models of HMOs that they own, despite the fact that ownership of a staff- or group-model HMO was one criterion for inclusion in the trend-setting group. All insurers in both groups own IPA-model HMOs, and one-quarter own staff-model HMOs; all of the trend-setting insurers own group/network-model HMOs, compared with 10 percent of the comparison group. Only the trend-setting group owns any mixed-model HMOs. Trend-setting insurers are ten times more likely to own all three models of HMOs (27.6 percent, compared with 2.6 percent). Fifty-three percent of their HMOs are federally qualified, compared with 75 percent of the comparison group’s HMOs.

The two groups differ widely on enrollee distribution across HMO models. Two-thirds of HMO enrollees in the trend-setting insurers’ HMOs are in IPA-model plans, one-quarter are in group-model plans, and the remainder are in staff- and mixed-model plans. Ninety-eight percent of comparison group enrollees are in IPA-model HMOs.

Trend-setting insurers are more likely to offer single-service HMO and PPO products. Eighty-eight percent of the trendsetters offer a single-service HMO product; 54 percent offer a single-service PPO product. In the comparison group, 31 percent offer a single-service HMO product, and 38 percent offer a single-service PPO product. In addition, trend-setting insurers offer a broader variety of single-service products (Exhibit 9).

Ninety percent of trend-setting insurers offer an open-ended HMO product, compared with only 8 percent of insurers in the comparison group (two insurers). The open-ended HMO products of the two groups do not differ much. The comparison group insurers all require a separate out-of-network deductible, whereas only half of the trend-setting insurers require a separate deductible. Both groups require copayment for out-of-network use. Enrollee stop-loss amounts are higher for the trend-setting group (minimum $1,000, maximum $7,500) than for the comparison group ($500/$3,000).
Exhibit 9
Percent Of Insurers Offering Single-Service Managed Care Products, Weighted By Premium Volume, 1990

<table>
<thead>
<tr>
<th></th>
<th>HMO</th>
<th>PPO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trendsetters</td>
<td>Other</td>
</tr>
<tr>
<td>Mental health/substance abuse</td>
<td>69.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Dental</td>
<td>84.4</td>
<td>31.1</td>
</tr>
<tr>
<td>Vision care</td>
<td>17.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Tertiary care</td>
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<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>8.8</td>
<td>0.0</td>
</tr>
</tbody>
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Source: HIAA Managed Care Survey, 1990.

Characteristics Of The Trendsetters

Managed care is founded on a belief that organizations can influence the patterns of health services delivery based on market forces; in other words, managed care organizations reward and encourage efficiency by channeling more patients to those with efficient practice patterns. This dynamic plays out in the local marketplace and is difficult to assess with the broad national data gathered through HIAA’s Managed Care Survey; however, we were able to examine some characteristics of managed care networks that differentiate the comparison and trend-setting groups.

Provider networks. To examine the composition of insurers’ networks, we looked at the ratio of enrollees to physicians within each carrier and within each type of managed care plan. For all survey respondents, the enrollee-to-physician ratio for HMOs was three times higher than that for PPOs, confirming common wisdom that HMOs have significantly tighter networks than do PPOs. Overall, insurer-sponsored managed care plans had relatively few enrollees for every physician contracted; HMOs averaged sixty enrollees per physician in 1990, and PPOs averaged twenty-four. In 1988, HMOs averaged twenty-two enrollees per physician, and PPOs averaged twenty-eight.

Insurers often express a market strategy of building a broad geographic network in new markets, subsequently “feeding” the networks with greater numbers of enrollees and “tightening” the networks by failing to renew contracts with providers whose practice patterns are inconsistent with the plan’s philosophy or standards for cost-effectiveness. These low ratios could be a reflection of new networks in new markets. They could also reflect the intense competition among managed care networks in local market areas, which could prevent individual carriers from gaining sufficient market share for effective managed care. In either case, we would expect to see increases in enrollee-to-physician ratios for both...
PPOs and HMOs over time, as ratios in HMOs have begun to increase. For both HMOs and PPOs, more trend-setting carriers have enrollee-to-physician ratios greater than the mean, compared with insurers in the comparison group. Twenty-five percent of trendsetters have higher-than-average ratios for HMOs (9 percent in the comparison group), and 41 percent have higher-than-average ratios for PPOs (24 percent in the comparison group).

Trend-setting insurers are also far more likely to have refused to renew a provider’s contract, indicating that trend-setting insurers are more aggressive about weeding out their provider networks. More insurers in both groups have refused to renew one or more PPO contracts than have terminated HMO contracts. However, significantly more trend-setting carriers have terminated PPO contracts than in the comparison group.

**Provider reimbursement.** Trend-setting carriers appear to use more cost-effective methods of reimbursing hospitals and physicians than insurers in the comparison group. This generalization holds for both HMOs and PPOs. With respect to hospital reimbursement by HMOs, all trend-setting carriers reported that per diem payment is their most common method of payment. In contrast, only 70 percent of the comparison group reported per diem as their most common payment method (including one carrier that reported using per diem payments and DRGs equally often). The other 30 percent most frequently use either billed or discounted charges.

Physician reimbursement in HMOs also appears to be more tightly controlled by trend-setting insurers. Both groups reported that capitation is the most common methodology for paying primary care physicians (86 percent for trend-setting insurers and 91 percent for others). However, trendsetters that do not capitate primary care physicians use defined fee schedules, whereas comparison group insurers use charge-based payment. The pattern is similar for payment of specialists; trendsetters either capitate or pay by fee schedules, whereas the comparison group uses charge-based reimbursement exclusively (either discounts or UCR).

The contrast between payment methodologies of trend-setting carriers and the comparison group is even greater for PPOs than for HMOs. For hospital reimbursement, trend-setting insurers use per diem payments about two-thirds of the time; comparison-group insurers use discounted charges almost two-thirds of the time. With respect to physician payment, PPOs operated by trend-setting insurers rely most heavily on fee schedules to pay both primary care physicians and specialists, regardless of the method of hospital reimbursement. Comparison group insurers, on the other hand, tend to use fee schedules only if they reimburse hospitals using per diem payments.
Utilization management. Finally, we examined utilization management in PPOs by the two groups of insurers. Trend-setting insurers apply almost all of the utilization management techniques included in the survey to a greater proportion of PPO enrollment than do insurers in the comparison group. Trend-setting insurers use provider profiling and feedback four times more often than do other insurers. Provider profiling is important both to support quality assurance activities and to encourage providers to modify their practice patterns.

To control costs, trendsetters reveal greater emphasis on channeling patients to efficient providers than is the case in the comparison group. Nearly half responded that channeling patients to efficient providers is the most important cost containment factor in HMOs, while almost two-thirds of comparison group insurers focus on utilization review (Exhibit 10). In PPOs, trend-setting insurers also favor utilization-focused strategies over pricing strategies, though not as strongly. Comparison-group insurers most often rank discounts first for cost containment in PPOs.

Conclusions

Managed care has become employers' first line of defense against rising health care costs, and the commercial insurance industry plays a major role in the design and development of employer-based managed care coverage. In eight years, network-based managed care has grown from nearly zero to 25 percent of group health coverage by commercial insurers.

Given the rapid development of managed care, it is not surprising that no consensus has developed concerning an ideal managed care strategy. However, those carriers identified as trendsetters appear to be taking a

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<thead>
<tr>
<th>Exhibit 10</th>
<th>Most Important Managed Care Element For Cost Savings, HMO And PPO Plans, 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HMO</td>
</tr>
<tr>
<td></td>
<td>Trendsetters</td>
</tr>
<tr>
<td>Utilization review</td>
<td>0.8%</td>
</tr>
<tr>
<td>Channeling to efficient providers</td>
<td>47.4</td>
</tr>
<tr>
<td>Discounts</td>
<td>24.2</td>
</tr>
<tr>
<td>Other provider reimbursement methods</td>
<td>27.6</td>
</tr>
</tbody>
</table>

Source: HIAA Managed Care Survey, 1990.
Note: Percentage of insurers indicating element as most important. Numbers may not add to 100 due to rounding.
somewhat different approach to managed care, in both HMOs and PPOs, than other carriers. For example, they use more cost-effective reimbursement methods in both their HMO and PPO business; they use provider profiling techniques more frequently; and they are more likely to renew provider contracts selectively. These factors provide evidence to support a strategy of encouraging efficient practice patterns and channeling patients to those efficient providers, instead of relying more heavily on negotiated discounts and utilization review for cost management.

The data also support evidence of a convergence toward comprehensive point-of-service plans and away from traditional closed-panel HMOs and price-discounted PPOs. Some analysts and industry managers view point-of-service and other hybrid plans as an end point; others view them as a transitional stage necessary to ease enrollees into managed care before moving into more restrictive closed-panel systems.

To understand how managed care operates, it is less important to ascribe a label to managed care plans—HMO or PPO, IPA-model or group-model HMO, and so on—than it is to understand the characteristics and structure of the individual plans and the local markets in which they operate. It is difficult to know how aggregate survey data such as these can apply in individual market areas.

In a number of local markets, including many urban health care markets, growth in managed care has manifested itself in the form of multiple (twenty to thirty) competitive network-based managed care plans. In such an environment, individual managed care plans may not hold sufficient market share to influence providers’ behavior. Managed care strategies that focus on modifying providers’ practice patterns must necessarily rely on substantial market share to be successful. The influence of managed care operates at three levels simultaneously. First, each managed care network endeavors to achieve a sufficient share of its contracted providers’ business to conduct profiling, influence individual practice patterns, and adequately convey the plan’s organizational culture to its participating providers. Second, the overall market share held collectively by all managed care plans in a community influences providers’ practice patterns overall (that is, community standards for care). Third, the overall market share held by an individual insurer or managed care plan affects that plan’s ability to recruit physicians whose practice patterns are consistent with the plan’s organizational culture.

To achieve these objectives, we expect to see accelerated consolidation of the insurance industry around managed care as insurers move from conventional insurance to managed care and as managed care plans consolidate within local and regional markets. This is evidenced in the recent announcement by Lincoln National Life Insurance, a company...
strongly oriented to managed care, that it intends to divest its medium-
to-large employer group health business. This decision by a sophisticated,
reputable firm underscores the expense and difficulty of making managed
care work in local markets without substantial market share.

Our survey results clearly confirm an extraordinary rate of change in
both insurers’ managed care roles and in the overall employer health
benefit market. As insurers gain experience with alternative approaches
to managing care, they are refining and altering the characteristics,
structure, and operations of their network-based plans. It is apparent that
insurers’ commitment to developing effective managed care will continue
to grow along with employers’ demand for these systems.

Coauthors include Steven DiCarb, who drafted preliminary survey findings; Cynthia Sullivan,
who provided technical assistance; John Nail, who performed data analysis; and Louis Hampers
and Anke Schultz, who gathered primary data and provided comments on an initial draft of survey
findings.

NOTES

1. In the text, we use the terms insurer and carrier interchangeably to mean parent company.
   Parent companies include a holding company or parent company and its subsidiaries.
   HIAA membership consists of 185 parent companies with a total of 300 private health
   insurance companies. Not all member companies provide individual or group health
   insurance; some provide disability insurance, long-term care insurance, Medicare
   supplemental insurance, and/or reinsurance. The HIAA Managed Care Survey used
   parent company as the unit of analysis.


3. In Health Affairs, Summer 1991, HIAA reported premium increases calculated from
   the premium values reported by a panel of employers who responded to the survey in
   consecutive years. Although we viewed this methodology as technically superior to
   using the rate of increase reported by employers, we found inexplicable variations
   between the reported and calculated premium increases. Upon further investigation,
   we found significant errors in the data used in the calculated numbers, including
   inconsistency in the benefit plan used in the calculations from year to year and
   inaccurate responses. Therefore, for purposes of this trend analysis, the authors present
   the average of the rates of increase reported by all employers responding to the HIAA

4. J.C. Robinson, “HMO Market Penetration and Hospital Cost Inflation in California,”
   Journal of the American Medical Association (20 November 1991): 2719–2723; and G.
   Atkinson, “A Study of Cost-Shifting using Aggregate Published Data” (Unpublished
   paper commissioned by HIAA, October 1991). This study examined data from four
   states: three rate-regulated states (Florida, Maryland, and Washington) and one with-
   out statewide hospital rate setting (California). The study found that lower hospital
   Medicare margins were directly correlated to higher mark-up on private-sector charges,
   except in Maryland (which is exempt from Medicare’s prospective payment system)
   and in California. In California, which has the highest managed care market penetra-
tion of any state, private-sector mark-up remained constant despite declining Medicare margins.

5. Closed-panel HMOs are traditional HMOs. Enrollees receive prepaid comprehensive health coverage for both hospital and physician services. Members are enrolled for a specified period of time and do not receive coverage for any services provided by non-HMO providers. In an open-ended HMO, enrollees receive some health care coverage for services received outside of the provider network. However, benefits for services received outside of the HMO network are usually less comprehensive, and enrollees are required to pay an additional copayment and/or deductible for these services.


7. SMG Marketing Group, Preferred Provider Organizations: Industry Characteristics, Growth, and Trends (Chicago: American Association of Preferred Provider Organizations, April 1991). It should be noted that some PPOs included in the AAPPO survey may not contain all of the characteristics that the authors consider necessary to qualify as a network-based managed care plan. In addition, the survey may include some inadvertent double counting of enrollees due to the survey methods used. Despite these factors, the authors believe these data to be a more reliable estimate of total PPO enrollment than other available sources.


10. R. Formisano, “An Analysis of Competitive Movements of Suppliers in the Health Insurance Industry: January 1984–December 1989” (Unpublished paper commissioned by HIAA, November 1990). This paper did not specifically examine the characteristics of entering and exiting firms; the data presented here were calculated by the authors from Exhibits 9 and 10.

11. Kraus et al., Managed Care: A Decade in Review, 55.

12. This survey did not collect information on the degree to which managed care plans use withholds in conjunction with fee schedules and discounted charge-based reimbursement systems. By withholding a percentage of the negotiated fees, subject to the fulfillment of specified performance criteria, managed care plans introduce a financial incentive for physicians to avoid overuse into a fee-for-service reimbursement system.