

Pricing and Performance in Health Maintenance Organizations: A Strategic Management Perspective

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Pricing decisions in the modern health care organization are complex and important. Multiple parties including hospitals, health maintenance organizations (HMOs), independent physicians, insurance companies, and regulators often are involved in price determination. Hence pricing is a difficult and challenging strategic task. Kotler and Clarke (1987, p. 376) note:

Due to third party reimbursement, to regulated pricing structures, and to consumer and provider insensitivity and lack of price awareness, pricing's role in health care marketing is not as straightforward as it is in other industries.

Complexity has made it difficult for health care providers to manage costs, which in turn has led to an escalation in health care prices. Expenditures on health care in the United States reached \$425 billion in 1985, up 8.9% from the previous year. Moreover, though the consumer price index (CPI) rose a modest 3.8% in 1985, the medical care component of the CPI increased by 6.2% (Waldo, Levit, and Lazenby 1986). More alarming are the recently computed figures for calendar year 1986. During that period, the CPI increased by a meager 1.1% yet the nation's health care bill climbed 7.7% (Gannes 1987). As prices have risen, so has the popularity of managed-care plans—particularly HMOs.

Managed-care plans simplify pricing by retaining a large degree of control over

the medical care their members receive. HMOs, for example, provide comprehensive physician and hospital services to voluntarily enrolled populations for set monthly premiums that are paid in advance. In theory, managed-care providers use their size and buying power to secure medical services at "wholesale" prices. Empirical support is provided by Luft (1981), who found that HMO members spend between 10 to 40% less on health care, both in premium payments and out-of-pocket expenditures, than do individuals who hold traditional health insurance.

Managed-care plans also attempt to provide more health benefits than are offered through traditional insurance coverage. Most HMOs have no deductibles and pay for 100% of the care received. Many HMOs also provide free regular checkups, discount dental and optical policies, and preventive health services (Gannes 1987). Consumer response has been very positive. Whereas only 9.7 million Americans belonged to an HMO in 1980, that number more than doubled to 21.1 million in 1985. This number is forecasted to increase to 100 million by 1996 (Work and Kyle 1986). Furthermore, William Blair & Company, an investment banking firm, believes that of the 68 metropolitan areas with a population of more than 500,000, only four can be considered to be "maturing" HMO markets. The company adds that the opportunity for

Innovative, consumer-oriented pricing strategies have contributed to the impressive growth of health maintenance organizations (HMOs). In a national study of HMO marketing directors, the relationships between strategic management style and (1) the relative importance of pricing in competitive marketing strategy, (2) the effectiveness of price strategy planning, and (3) financial performance are examined. The findings indicate that HMOs practicing effective price planning also perform well on an overall basis. Insight into the content and substance of HMO pricing strategies is also provided.

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HMO expansion is excellent in the 64 remaining markets (Tatge 1985).

STUDY PURPOSE

Though managed-care programs are assuming an increasingly important role in the battle against health care cost inflation, little is known about their pricing policies and performance. To date, no systematic attempts have been made to study HMO pricing strategies. The purpose of our study is to contribute to the development of a knowledge base centered on HMO pricing by (1) introducing the Miles and Snow (1978) strategic management style typology to the health care marketing literature and (2) examining the nature of the relationship between this increasingly cited typology and HMO pricing effort, pricing effectiveness, and overall financial performance.

To structure the discussion, we first introduce and review the literature on strategic management styles. The three major hypotheses tested in our study then are presented. We follow with a description of the method used in our national field study of HMO marketing directors. Next we report results and discuss implications of the findings for health care marketers, HMO administrators, and other health care providers. Finally, we summarize the study and explore directions for future research.

STRATEGIC MANAGEMENT STYLE

The study of strategic management style has emerged as one of the most valuable and practical research streams in the field of management. Prominent organizational scholars such as Miles and Snow (1978), Miller and Friesen (1978, 1980), Mintzberg (1979), and Porter (1980, 1985) have developed classification schemes of strategic management that have been credited with bringing order and parsimony to a cha-

otic and complex field of study (Carper and Snizek 1980; Hambrick 1984). This stream of work has generated important insights into the fundamental nature and dynamics of strategic decision making and, perhaps most important, into the determinants and dynamics of successful organizational performance.

One classification scheme, the Miles and Snow (1978) typology of strategic management styles, has attracted much interest and attention. The fundamental premise of this typology is that organizations develop relatively enduring archetypal styles of strategic management. These styles reflect a specific pattern of strategic decision making that characterizes organizations' adaptive relationships with their markets and environments. The styles are enacted through decision-making consistencies in terms of product market entry behavior, environmental surveillance, technological breadth, planning processes, and control mechanisms. On the basis of in-depth field studies conducted in four industries (hospitals, food processing, electronics, and college textbook publishing), Miles and Snow identified four archetypal strategic management styles. Moreover, they found that three of the four styles performed consistently well. They labeled the four archetypal styles to connote their predominant strategic stance: (1) defenders, (2) prospectors, (3) analyzers, and (4) reactors.

The Archetypal Styles

Defender organizations operate in a very narrow and limited product/market domain. They concentrate on a focal, core technology and are led by individuals whose backgrounds are in finance, production, and/or accounting. The defender organization markets fewer products (goods, services, and ideas) than its competitors and aggressively protects the domain in which it operates by offering excellent quality, superior service, and low prices. The or-

ganization "lags" behind the rest of the industry in innovative behavior. In fact, defenders appear to change only when forced to do so by environmental threats and problems. Finally, this type of organization prides itself on being extremely efficient.

Prospectors are the opposite of defenders. These organizations conduct their business in broad and ever-changing product/market domains. They take pride in being innovative and encourage risk taking. Technologically, the organization attempts to maintain flexibility, which enables it to respond early to signals indicating areas of opportunity. Top managers often have marketing and/or research and development (R&D) backgrounds. Prospectors encourage participative decision making and are structured on a product basis as opposed to a functional basis. Though the organization is successful overall, it may not maintain market strength in all of the areas it enters.

Analyzers are hybrid organizations and represent a cross between the defender and prospector styles. They attempt to maintain a stable, limited line of products while simultaneously moving quickly to follow a carefully selected set of the more promising new developments in the industry. Analyzer organizations do everything in moderation. Thoughtful analysis always precedes decisions involving risk. This type of organization is seldom "first in" with new products. However, analyzers place a high priority on monitoring the actions of their key competitors and on being "second in" with a more cost-efficient product offering.

Reactor organizations do not have a consistent product/market orientation. As a result, they move across the "pure" styles. For example, they may act like defenders when confronting new competitors, prospectors when conducting environmental surveillance, and analyzers when entering new markets. This type of organization usually is not will-

ing to take as many risks as its competitors, nor is it as persistent as some of its competitors in protecting established product/service areas. Reactor organizations generally "drift along," responding to both opportunities and threats as they arise.

The Adaptive Cycle

The Miles and Snow typology is based on a theoretical model of strategic adaptation. Miles and Snow propose that strategic performance is determined by the nature and quality of the adaptive posture, or alignment, that an organization achieves and sustains with its environment and markets. They sug-

gest that the process of effectively aligning an organization with its environment and markets involves a complex and dynamic decision-making cycle, referred to as the "adaptive cycle." Every organization confronts the fundamental challenges of the adaptive cycle and each adopts a relatively enduring style of response.

According to Miles and Snow, the adaptive cycle can be divided into three major strategic "problem and solution" sets: (1) an entrepreneurial problem set centering on the definition of the organization's product/market domain, (2) an engineering problem set involving the choice of technologies and processes to be used for production, op-

erations, and distribution, and (3) an administrative problem set involving the selection, rationalization, and development of organizational structure and policy processes. Moreover, each of the three problem sets involves multiple dimensions. In total, 11 dimensions are identified as comprising the adaptive cycle. The characteristic responses of each style to these three problem sets and their supporting dimensions are summarized in Table 1.

HYPOTHESES

Both empirical evidence and the theoretical propositions advanced by Miles and Snow (1978) suggest relationships

TABLE 1
Dimensions of the Adaptive Cycle and Strategic Management Style Characteristics^a

Adaptive Cycle Components	Dimensions	Management Styles			
		Defenders	Prospectors	Analyzers	Reactors ^b
Entrepreneurial problems and solutions	Product-market domain	Narrow and carefully focused	Broad and continuously expanding	Segmented and carefully adjusted	Uneven and transient
	Success posture	Prominence in "their" product market(s)	Active initiation of change	Calculated followers of change	Opportunistic thrusts and coping postures
	Surveillance	Domain dominated and cautious/strong organizational monitoring	Market and environmentally oriented/aggressive search	Competitive oriented and thorough	Sporadic and issue dominated
Engineering problems and solutions	Growth	Cautious penetration and advances in productivity	Enacting product market development and diversification	Assertive penetration and careful product market development	Hasty change
	Technological goal	Cost efficiencies	Flexibility and innovation	Technological synergism	Project development and completion
	Technological breadth	Focal, core technology/basic expertise	Multiple technologies/"pushing the edge"	Interrelated technologies/"at the edge"	Shifting technological applications/fluidity
Administrative problems and solutions	Technological buffers	Standardization, maintenance programs	Technical personnel skills/diversity	Incrementalism and synergism	Ability to experiment and "rig solutions"
	Dominant coalition	Finance and production	Marketing and R&D	Planning staffs	Trouble-shooters
	Planning	Inside/out . . . control dominated	Problem and opportunity finding/campaign (program) perspective	Comprehensive with incremental changes	Crisis oriented and disjointed
	Structure	Functional/line authority	Product and/or market centered	Staff dominated/matrix oriented	Tight formal authority/loose operating design
	Control	Centralized and formal/financially anchored	Market performance/sales volumes	Multiple methods/careful risk calculations . . . sales contributions	Avoid problems/handle problems . . . remain solvent

^aConstructed by the authors on the basis of a formative review of Miles and Snow (1978). For an overview of the adaptive cycle and the 11 underlying dimensions, see Miles and Snow (1978, p. 13-93).

^bConventionally, reactors have been presented as a "residual" style lacking consistent response characteristics.

between strategic management style and pricing in terms of (1) the importance placed on pricing in relation to the other three marketing mix elements (product, promotion, and distribution) and (2) the effectiveness of price strategy planning. Conventionally, economic theory has treated pricing as a barometer of the marketplace rather than as a strategic variable. However, marketing research and practice indicate that pricing is a strategic variable that can be used to express distinctive competencies and generate distinctive competitive market positions (Monroe 1979; Oxenfeldt 1973). Hence, organizations can—and should—plan their pricing strategy just as they plan product, promotion, and distribution strategies.

Theoretically, Miles and Snow indicate that the four management styles differ in their functional strategy emphasis and competence. For example, prospectors are strong advocates of the marketing concept and fund marketing initiatives liberally. Though probably skilled at planning price strategy, they are likely to place greater emphasis on product development than they do on pricing. In contrast, defenders probably place a high priority on pricing decisions. The emphasis they place on engineering tasks and improving internal efficiency implies that pricing has a more important role in competitive marketing strategy than do the other marketing mix elements of promotion, product, and distribution. However, in spite of the importance defenders may place on pricing, their ability to engage in effective price planning is suspect. They have little conventionally defined marketing prowess and may equate price planning with cost analysis.

Analyzers, like prospectors, pride themselves on being marketing oriented. Given their calculating nature, coupled with their emphasis on planning and integration, analyzers appear to understand the complexities involved in planning price strategy. However, their desire to be "second in"

with a new product implies that pricing may not be as important as the other elements of competitive marketing strategy, most notably the product effort. Reactor organizations respond to the challenges of the adaptive cycle inconsistently. They do not appear to practice marketing fully and they have few, if any, functionally distinctive competencies. As a result, reactor organizations may not engage in effective planning, specifically as it relates to pricing. In spite of the complexities involved in planning price strategy, reactors may place great importance on pricing because it is an element of competitive marketing strategy that can be adjusted easily and often.

Some empirical support for each of the archetypes' distinguishing characteristics is provided by Hambrick (1983) and Snow and Hrebiniak (1980). Hambrick (1983), in a study focusing on only two of the four archetypal styles, found prospectors to have a strong entrepreneurial orientation (high product R&D expenses and high marketing expenses) whereas defenders were oriented toward efficiency (high capital intensity and high employee productivity). Snow and Hrebiniak's (1980) study examined the relationship between strategic management style and 11 categories of distinctive competence. All four strategic styles were included in their research design. As expected, prospectors were strong in product R&D and market research. Defenders were strong in production and applied engineering and analyzers in general management. Reactors lacked an identifiable pattern of distinctive competence.

In summary, linkages have been developed between the four strategic management styles and a variety of functional-level attributes. However, important questions remain and the typology warrants further extensions and testing. Elements of functional marketing strategy and pricing, in particular, have not been comprehensively conceptualized or tested in previous re-

search. Hence, the purpose of our study is to contribute to the development of a knowledge base centering on HMO pricing by examining the nature of the relationship between two dimensions of HMO pricing, importance and planning effectiveness, and strategic management style. Empirical studies conducted to date and the theoretical considerations outlined here suggest the following hypotheses.

- H₁: The relative importance of pricing in competitive marketing strategy, as perceived by marketing managers, will be higher in defender and reactor HMOs than in prospector and analyzer HMOs.
- H₂: The effectiveness of price strategy planning, as perceived by marketing managers, will be higher in prospector and analyzer HMOs than in defender and reactor HMOs.

Linkages also have been developed between strategic management style and financial performance. In their four industry studies, Miles and Snow (1978) found that defender, prospector, and analyzer organizations, largely because of their consistent response patterns, were equally likely to perform well. Moreover, because of its inconsistent pattern of adaptation, the reactor frequently performed poorly. Empirical studies have confirmed these proposals. Snow and Hrebiniak (1980) found that defenders, prospectors, and analyzers outperformed reactors in three of the four industries they studied. Interestingly, reactors performed equally well or better in a regulated environment. More recently, Smith, Guthrie, and Chen (1986) found that defenders, prospectors, and analyzers perform equally well and outperform reactors. Thus, the following hypothesis for the relationship between strategic management style and HMO financial performance is suggested.

- H₃: Financial performance, in terms of return on investment (ROI) and profitability, as perceived by marketing managers, will be
- (a) equal in defender, prospector, and analyzer HMOs and

- (b) higher in defender, prospector, and analyzer HMOs than in reactor HMOs.

METHOD

A cross-sectional field study was conducted within the U.S. health maintenance organization (HMO) industry. The survey research instrument was targeted and mailed to marketing directors in the 406 HMOs in operation at the time the study was undertaken. A variety of approaches developed in survey research to enhance response rate and response quality were used in the study. The overall approach was a modified version of Dillman's (1978) "total design method." The first mailing included a cover letter, a questionnaire, and a postage-paid return envelope. One week later, all potential respondents were sent a reminder postcard. The third mailing, sent two weeks after the postcard reminder, included another cover letter, questionnaire, and postage-paid return envelope. This last mailing was sent only to those HMO marketing directors who had not responded as of the followup mailing date. One nonmonetary incentive was provided—respondents were given the opportunity to request a summary of the survey results.

The questionnaire itself consisted of two major parts. Part one measured strategic management style. Part two included three sections and measured (1) the relative importance of pricing in overall competitive marketing strategy, (2) the effectiveness of price strategy planning, and (3) financial performance. The entire questionnaire was pretested twice. While in draft form, the questionnaire was pretested in select HMOs in two states. A second pretest of the actual instrument was conducted one month after the initial pretest and two weeks prior to project mailings. The directions, wording, and structure of the questionnaire were improved on the basis of the feedback received from pretest participants. Ad-

ditionally, the content validity of all questions was assessed by an expert panel composed of both strategic management and marketing management researchers.

Miles and Snow's typology of strategic management styles was operationalized and measured in a new, theoretically anchored way. Specifically, two multiple-option questions were developed for each of the 11 dimensions in Miles and Snow's adaptive cycle model (see Table 1). Each question had four distinct response options reflecting the traits of each of the management styles on the dimension in question. For example, one of the two multiple-option questions on surveillance asked respondents to consider the amount of time their HMO spends on monitoring changes and trends in the marketplace. It also requested respondents to choose from one of the four following response options: (1) lengthy—we are continuously monitoring the marketplace, (2) minimal—we really don't spend much time monitoring the marketplace, (3) average—we spend a reasonable amount of time monitoring the marketplace, and (4) sporadic—we sometimes spend a great deal of time and at other times spend little time monitoring the marketplace. Response option 1 (lengthy) represents the prospector, option 2 (minimal) the defender, option 3 (average) the analyzer, and option 4 (sporadic) the reactor. Respondents were asked to answer each question by circling the letter of the one response option that they perceived best characterized their HMO. In addition to extensively pretesting the entire instrument, we separated questions relating to the same strategy dimension and varied the ordering of response options for each question in order to minimize response bias and encourage thoughtful analysis by the respondents.¹

¹A complete copy of the questionnaire is available for interested readers. The instrument facilitates diagnostic assessments in which an organization's strategic management style is analyzed constructively dimension by dimension.

Given the nominal scale level of the data produced by the multiple-option questions, final categorization of respondent HMOs into one of the four alternative styles was based on a "majority-rule" decision structure. Thus, HMOs were classified as defenders, prospectors, analyzers, or reactors according to which response options were most often selected. In the case of ties, two separate but related decision rules were employed. Specifically, ties between defender, prospector, and/or analyzer response options resulted in the organization being classified as an analyzer, whereas ties involving reactor response options resulted in the HMO being categorized as a reactor.²

To enhance the quality of the categorization decision, we used a test-retest reliability procedure. The retest was sent to the first 102 respondents. The mailing included a new cover letter, slightly modified questionnaire cover, and a postage-paid return envelope. One week after the initial retest mailing, a reminder postcard was sent to all retest participants. Fifty questionnaires were received from retest participants, but only 47 were usable. Hence the usable retest response rate was 46% (47 of 102).

The reliability coefficients for the 22 multiple-option questions ranged from

²Both of the decision rules involving ties are anchored theoretically in Miles and Snow's original conceptualization of the four archetypes. Analyzers, according to Miles and Snow, are "hybrid" organizations and as such have both defender and prospector characteristics. In contrast, reactors respond inconsistently to the challenges of the adaptive cycle—for example, behaving like defenders when conducting environmental surveillance, like prospectors when developing new products, and like analyzers when controlling and evaluating their performance. Thus, classifying organizations as analyzers when they have selected equal numbers of defender, prospector, and/or analyzer response options is consistent with Miles and Snow's definition of the analyzer archetype. Similarly, categorizing organizations as reactors when there is a tie between reactor selections and either defender, prospector, or analyzer response options is a theoretically anchored decision rule. Moreover, both decision rules ensure that valuable field data are not discarded prematurely.

.50 to .82, with a mean reliability of .63. Though encouraging, this overall mean is slightly below the .70 level recommended for measurement instruments that are in a developmental stage (Nunnally 1978). On the basis of these findings and following the guidelines developed by Churchill (1979), we made refinements to purify the scale. Specifically, the two questions representing each of the 11 adaptive cycle dimensions were carefully evaluated and compared. The question with the highest reliability coefficient in each pair was retained in the scale used to categorize HMOs. The reliability coefficients for these 11 questions ranged from .56 to .82, with a mean reliability of .69. This value parallels Nunnally's (1978) guideline. Moreover, the integrity of Miles and Snow's theoretical model is upheld and enhanced by basing the style categorization decision on questions representing all 11 adaptive cycle dimensions and by using the questions that were most reliable. The reliability of style categorization, an important coefficient that represents the percentage of HMOs classified similarly during both the initial test and followup retest, was calculated and found to be .74. Given the developmental nature of this new measurement approach, the fact that the reliability of style categorization exceeds Nunnally's (1978) guideline is encouraging.

The pricing and financial performance constructs were operationalized in the second part of the questionnaire. To ascertain the importance of pricing in competitive marketing strategy (H_1), respondents were asked to allocate 100 points among the four elements of the marketing mix: (1) product effort, (2) pricing effort, (3) promotion effort, and (4) distribution effort. This measurement approach, known as constant-sum scaling, is most appropriate when the researcher wants respondents to indicate the relative weighting of some fixed number of factors. In addition to having interval properties (Aaker and Day 1980), constant-sum scales have been

widely used in marketing research (Samiee 1980; Udell 1972).

A 7-item scale was developed to measure the other pricing construct investigated—the effectiveness of price strategy planning (H_2). The scale itself was developed iteratively. First, interviews were conducted with HMO marketing directors to gain insight into the process HMOs follow in planning price strategy. Second, the literature on pricing decisions, including the work of Guiltinan (1976), Monroe (1979), Oxenfeldt (1973), and Weston (1972), was carefully evaluated. Third, marketing management studies that have investigated the measurement of strategic marketing performance were reviewed (Abell and Hammond 1979; Kotler 1977; Kotler, Gregor, and Rodgers 1977; Zeithaml, Parasuraman, and Berry 1985).

The combination of these activities led to the development of a scale operationalizing the price planning construct along seven competency dimensions: (1) accuracy of profitability and revenue forecasting, (2) allocation of marketing department resources, (3) integration of marketing activities, (4) marketing planning process, (5) effectiveness of pricing program(s), (6) effectiveness of cost containment, and (7) control and evaluation of marketing activities. In making their evaluations, respondents were asked to compare their HMO with their major competitors on a 7-point scale with values ranging from 1 (much worse) to 7 (much better). The reliability of this scale in terms of coefficient alpha was .73.

Financial performance (H_3) was measured on a subjective self-report instrument similar to that developed and validated by Dess and Robinson (1984). Respondents were asked to evaluate their HMO in terms of both profitability and return on investment (ROI) in comparison with their major competitors. These evaluations were made on a 7-

point Likert-type scale ranging from 1 (much worse) to 7 (much better). As noted by Dess and Robinson, such reports are generally very consistent with "objective" performance measures. The coefficient alpha for this scale was .95.

RESULTS

Response Rate and Nonresponse Bias Checks

A three-wave mailing, employing many of the response facilitation techniques recommended by Dillman (1978), resulted in the return of 150 usable questionnaires, or a response rate of 37% (150 of 406). To test for nonresponse bias, respondents and nonrespondents were compared along three dimensions representing a broad yet diverse characterization of the HMO industry: (1) qualification status (federally qualified or not federally qualified), (2) type of HMO (group, IPA, or staff), and (3) geographic distribution (north, south, east, or west). Results of a chi square independence of classification analysis conducted to compare respondents and nonrespondents along each of the three dimensions are reported in Table 2. Among the three variables tested, no response bias was found.

Style Classification Results

The newly developed and theoretically anchored approach to measuring strategic management style produced a distribution of 35 defenders, 46 prospectors, 56 analyzers, and 13 reactors. The relatively smaller number of defenders and especially reactors was expected given the growth-oriented, dynamic nature of the HMO industry. The comparatively large number of analyzers and prospectors also seems appropriate. Analyzers and prospectors strive to be innovative and to have a tolerance for ambiguity, two traits that might be expected in organizations in the growth stage of an industry life cycle.

H_1 . Strategic management style and the relative importance of pricing in competitive marketing strategy. To test the relationship between strategic management style and the relative importance of pricing, the multivariate approach (MANOVA) for repeated measures was used. Shaffer (1981) has indicated that it is the most appropriate technique to use when a design involves scales requiring the respondent to divide 100 points among a fixed number of factors. Overall, this relationship is found to be statistically nonsignificant (Wilks' criterion MANOVA $F = 1.40$; $p = .185$). Defenders and reactors do not place significantly more importance on pricing, relative to the product, promotion, and distribution efforts, than do prospectors and analyzers. However, in spite of this finding, insight into the competitive marketing strategy of HMOs can be gained by examining the cell means and ranks for the mix element allocations (see Table 3).

Two of the most interesting findings are (1) the number two rank ascribed to "distribution and delivery effort" by marketing managers in prospector and analyzer HMOs and (2) the number four rank given to this same element of competitive marketing strategy by defender and reactor marketing managers. Descriptively, prospectors and analyzers appear to be engaging in innovative behavior by bringing their services closer to consumers. In contrast, defenders are placing a high priority on pricing and service, whereas reactors are currently emphasizing promotion and pricing. By focusing on distribution and delivery, prospectors and analyzers may be laying the foundation for a competitive advantage that is both sustainable and distinctive. Alternatively, prospectors and analyzers may realize they are in the growth stage of the industry life cycle. Unlike pricing, promotion, and even the services offered, distribution decisions are inherently long term. As a result, defender and reactor HMOs may have difficulty matching the accessibility and

TABLE 2
Profile of Respondents and Nonrespondents

	Percentage of	
	Respondents	Nonrespondents
Qualification Status		
Federally qualified	69.1	63.7
Not federally qualified	<u>30.9</u>	<u>36.3</u>
	100.0	100.0
	(base = 149)	(base = 256)
$\chi^2 = 1.18$; d.f. = 1; no significant difference between respondents and nonrespondents; critical χ^2 value ($\alpha = .05$) = 3.84		
HMO Model Type		
Group	26.7	28.1
IPA	60.6	50.8
Staff	<u>12.7</u>	<u>21.1</u>
	100.0	100.0
	(base = 150)	(base = 256)
$\chi^2 = 5.37$; d.f. = 2; no significant difference between respondents and nonrespondents; critical χ^2 value ($\alpha = .05$) = 5.99		
Regional Distribution		
East	50.0	50.4
South	21.3	16.4
North	7.4	9.8
West	<u>21.3</u>	<u>23.4</u>
	100.0	100.0
	(base = 150)	(base = 256)
$\chi^2 = 2.69$; d.f. = 3; no significant difference between respondents and nonrespondents; critical χ^2 value ($\alpha = .05$) = 7.81		

TABLE 3
The Relative Importance of Pricing: Cell Means and Ranks^a

Marketing Mix Element	Strategic Management Style			
	Defender	Prospector	Analyzer	Reactor
Service effort (includes the services offered, services planning, services R&D, and pretesting)	27.77 (2)	23.07 (4)	23.04 (3)	25.38 (3)
Pricing effort (includes pricing policies, strategies, and tactics)	27.85 (1)	24.85 (3)	28.39 (1)	28.08 (2)
Promotion effort (includes advertising, personal sales calls, publicity, and sales promotion)	24.15 (3)	27.20 (1)	22.95 (4)	29.23 (1)
Distribution and delivery effort (includes the location of facilities, the hours during which services are available, and outreach activities)	<u>20.23 (4)</u>	<u>24.88 (2)</u>	<u>25.62 (2)</u>	<u>17.31 (4)</u>
	100.00	100.00	100.00	100.00

^aThe numbers in parentheses indicate the rank of marketing mix elements within styles.

convenience that prospector and analyzer HMOs offer to their members in the years ahead.

Aside from the comparatively low number of points ascribed to distribution and delivery effort by marketing managers in reactor (17.31) and defender (20.23) HMOs, marketing managers allocated their points among the mix elements relatively evenly. The allocations by prospector and analyzer marketing managers are especially balanced. Several alternative explanations are possible. First, normatively, respondents may have felt that any variable included on the scale must be important or it would not have been listed. Second, given the format and structure of a constant-sum scale, respondents may have allocated their points relatively evenly across the factors to save time and energy. This possibility appears greater when the number of factors can be divided easily into 100, as in our study. Third, the marketing programs of prospector and analyzer HMOs may be more balanced than those of the defender and reactor HMOs. Such a finding lends support to the proposition advanced by Miles and Snow (1978) that prospectors and analyzers are the most marketing-oriented of the four archetypal styles. Future work might attempt to clarify these important relationships.

H₂. Strategic management style and the effectiveness of price strategy planning. *H₂* posits significant relationships between strategic management style and the effectiveness of price strategy planning. To test this proposition empirically, scores on a 7-item price planning effectiveness scale were summed and compared across styles by means of ANOVA. Where significant differences were found between styles, Tukey-Kramer pairwise comparisons were computed. On the basis of this analysis, *H₂* is confirmed. The relationship between strategic management style and the effectiveness of price strategy planning is significant for five of the seven

items examined and, most important, for the construct overall. The results of the univariate ANOVAs and Tukey-Kramer pairwise comparisons testing *H₂* are reported in Table 4.

Examination of Table 4 reveals several important findings. First, as hypothesized, price planning effectiveness is higher in the prospector and analyzer HMOs than in the defender and reactor HMOs. Moreover, the prospector and analyzer means, as well as the defender and reactor means, are not significantly different. Second, the evaluations of marketing managers in defender and reactor HMOs are not significantly greater than those of managers in the prospector or analyzer HMOs. Interestingly, the evaluations by marketing managers in defender HMOs are greater than those by prospector managers on a dimension thought to be a distinctive strength of defenders—"effectiveness of cost containment." Finally, though not significantly different, the evaluations of defender marketing managers are greater than those of reactor managers for six of the seven scale items.

Strategic insight was added to these findings by asking respondents to evaluate the *content* of their HMOs' pricing strategies. Participating marketing directors were asked to allocate 100 points among four categories that Kotler and Clarke (1987) have identified as providing the basis for health care pricing: (1) costs—both direct and indirect, (2) demand—what the market will bear, (3) competition—what prices the competitors are charging, and (4) legal requirements—what regulators allow. As in testing *H₁*, the multivariate approach (MANOVA) for repeated measures was used. Overall, the relationship between strategic management style and the content of pricing strategies is significant (Wilks' criterion MANOVA $F = 1.84, p = .05$). To identify the exact nature of this relationship, univariate ANOVAs were performed on each of the four pricing strategy content variables. Further, where the univariate statistic was significant, Tukey-Kramer pairwise comparisons were computed. Given the exploratory nature of this analysis, pairwise comparisons were computed for univariate sta-

TABLE 4
The Effectiveness of Price Strategy Planning: Means, Univariate P-Values, and Significant Differences

Price Planning Effectiveness Measure	Strategic Management Style				Univariate P-Value
	Defender	Prospector	Analyzer	Reactor	
Accuracy of profitability and revenue forecasting	4.66 ^{a,b}	5.20 ^{a,c}	5.45 ^c	4.15 ^b	.0027*
Allocation of marketing department resources	4.46 ^a	5.31 ^b	5.14 ^b	4.62 ^{a,b}	.0197*
Integration of marketing activities	4.66 ^a	5.36 ^b	5.29 ^b	4.38 ^a	.0103*
Marketing planning process	4.80	5.36	5.18	4.46	.0779
Effectiveness of pricing program(s)	4.62	4.93	4.86	4.15	.3497
Effectiveness of cost containment	5.34 ^{a,b}	5.13 ^{a,b}	5.71 ^a	4.69 ^b	.0365*
Control and evaluation of marketing activities	4.86 ^{a,b}	5.31 ^a	5.04 ^a	4.23 ^b	.0244*
Summed value	33.40 ^b	36.60 ^a	36.67 ^a	30.68 ^b	.0005*

*Significant at $\alpha = .05$.

^{a,b,c}Means with the same superscript are not significantly different. Means with different superscripts are significantly different.

TABLE 5
The Content of Pricing Strategy: Means, Univariate P-Values, and Significant Differences

Pricing Strategy Content Variable	Strategic Management Style				Univariate P-Value
	Defender	Prospector	Analyzer	Reactor	
Costs (both direct and indirect)	42.79 ^{a,b}	43.54 ^{a,b}	49.82 ^a	38.08 ^b	.0716**
Demand (what the market will bear)	22.35	23.78	20.02	18.85	.2687
Competition (what prices the competitors are charging)	24.26 ^b	25.39 ^b	23.12 ^b	35.38 ^a	.0232*
Legal requirements (what regulators allow)	$\frac{10.60}{100.00^{a,b}}$	$\frac{7.29}{100.00^{a,b}}$	$\frac{7.04}{100.00^b}$	$\frac{7.69}{100.00^b}$.4966

*Significant at $\alpha = .05$.

**Significant at $\alpha = .10$.

^{a,b}Means with the same superscript are not significantly different. Means with different superscripts are significantly different.

tistics significant at both the .05 and .10 levels. The results of these analyses are reported in Table 5.

An examination of Table 5 indicates that the univariate p-value is significant for the "competition" base at the .05 level and the "costs" base at the .10 level. More specifically, reactor marketing managers place significantly more importance on the prices charged by competitors than do marketing managers in defender, prospector, and analyzer HMOs. Additionally, marketing managers in analyzer HMOs place significantly more importance on their costs when developing pricing strategy than do marketing managers in reactor HMOs. Both of these findings appear consistent with Miles and Snow's conceptualization of the four styles. Analyzers affirm their highly evaluative and thoughtfully cautious posture by strongly emphasizing the role of costs in pricing strategy. Similarly, the notion that reactors are insecure planners and environmentally dependent is supported by the comparatively high priority they place on prices charged by competitors. Overall, these findings add depth to the differences found between

styles in testing H_2 and to the Miles and Snow typology more generally. Moreover, in a measurement context, constant-sum scales appear to have the potential to provide interesting insights into the content of marketing strategies, an underdeveloped topic in the marketing management literature.

H_3 . *Strategic management style and financial performance.* Scores on the 2-item financial performance scale were summed and then compared across styles by ANOVA. Where significant differences were found, Tukey-Kramer pair-

wise comparisons were computed. Consistent with previous research, this hypothesis is supported. Specifically, for both ROI and the financial performance construct overall, the evaluations of marketing managers in defender, prospector, and analyzer HMOs are not significantly different. However, all are significantly greater than the evaluations of managers in reactor HMOs at the .05 level. Additionally, though the evaluations of profitability by marketing managers in defender and reactor HMOs do not differ significantly, the evaluations by prospector and analyzer managers are both significantly greater than those by managers in reactor HMOs at the .10 level. The financial performance findings are reported in Table 6.

With the addition of our findings, positive relationships have been found between strategic management style and financial performance in 10 relatively diverse industries. Moreover, though the "pure styles" (prospectors, defenders, and analyzers) have performed consistently well, the performance of reactor organizations has been inconsistent and usually poor. Unlike the pure styles, each having distinctive functional competencies (e.g., prospectors in marketing, defenders in operations and financial management, and analyzers in general management), reactors do not have distinctive expertise in any functional area. To survive and compete in

TABLE 6
Financial Performance: Means, Univariate P-Values, and Significant Differences

Financial Performance Measure	Strategic Management Style				Univariate P-Value
	Defender	Prospector	Analyzer	Reactor	
Profitability	5.09 ^{a,b}	5.20 ^a	5.38 ^a	4.23 ^b	.0811**
ROI	$\frac{5.12^a}{10.21^a}$	$\frac{5.02^a}{10.22^a}$	$\frac{5.18^a}{10.56^a}$	$\frac{3.75^b}{7.98^b}$.0220*
Summed value					.0229*

*Significant at $\alpha = .05$.

**Significant at $\alpha = .10$.

^{a,b}Means with the same superscript are not significantly different. Means with different superscripts are significantly different.

the long run, reactors are challenged to become more consistent in their strategic behavior. For many reactors, the defender posture might be easiest to engage. Defenders are highly focused and cost oriented and appear to perform a limited number of functions very well. These are important traits for organizations with financial problems.

MANAGERIAL IMPLICATIONS

Our findings have direct and meaningful implications for HMOs, as well as for other members of the growing and dynamic health services industry. First, health service administrators should undertake a thoughtful review of their organization's strategic management style. This review can be achieved by either (1) comparing the organization with the brief descriptions of the four management styles provided before or (2) comparing its strategic characteristics with those of the archetypes along all 11 dimensions of the adaptive cycle as outlined in Table 1. Furthermore, strategic insights can be gained by considering the management styles of key competitors, then studying their tendencies and vulnerabilities. Experience has shown that typing of organizations and competitors is most successful if undertaken by "experts" and/or a "team" of managers from a variety of departments within an organization.

The general benefits of the typing exercise include (1) improved understanding of the distinctive ways in which organizations and their competitors develop strategies and approach the marketplace, (2) identification of an organization's consistencies and inconsistencies in its strategy development process, (3) isolation of specific strategic policy-making strengths, weaknesses, and tendencies, as well as identification of vulnerabilities, and (4) the development of an information base that can guide organizational change and future strategic thrusts.

To illustrate, the relationship between strategic management style and financial performance is significant in our study. Defender, prospector, and analyzer HMOs are found to be equally likely to perform well financially. However, reactor HMOs struggle financially. Hence, defenders, prospectors, and analyzers might be challenged to sustain or improve their performance by enhancing the consistency they already have achieved in response to adaptive cycle challenges (see Table 1). Reactors face a more intense challenge. They must consider changing their style to achieve strategic consistencies and the functional competencies associated with effective performance. Reactors need to understand the "pure type" strategy styles and identify a manager—or set of managers—who will champion the development of a new strategic management style. Experience suggests that marketing executives, given their boundary-spanning perspective and role, are often uniquely qualified to assume this responsibility.

A second set of managerial implications relate specifically to the planning of price strategy and more broadly to the enhancement of general marketing competencies. In our study, significant linkages are established between price planning effectiveness and strategic management style. Defenders and reactors—HMOs that evaluated their price planning effectiveness as comparatively weak—face the most significant challenges. Both defenders and reactors appear to lack a strong marketing orientation and conventional marketing skills. Clearly, they found the planning of price strategy more difficult than did prospector and analyzer HMOs. Marketing training and development programs in defender and reactor HMOs could be improved. Special attention should be given to basic marketing concepts and methods, including target marketing and segmentation, forecasting and demand estimation, alternative pricing strategies, and marketing planning processes.

With stronger background in marketing fundamentals, defender HMOs might better understand and confront the complexities involved in planning their marketing and price strategies and, thus, enhance their solid financial performance. Reactors might be able to build some functional competencies around a marketing orientation, improve their ability to make better pricing decisions, and potentially stabilize their financial performance. Over the longer run, a reactor might use a marketing perspective to set a foundation for changing to a "pure type" strategy style.

Another important implication involves the interesting discovery in our study of the very important role of distribution and delivery in the competitive marketing strategy of many HMOs. Prospector and analyzer marketing managers both ranked distribution and delivery effort—relative to the service, pricing, and promotion efforts—second in overall importance. Given this emphasis, defender and reactor HMOs are challenged and encouraged to evaluate more carefully the evolving needs and behaviors of health care consumers. Specifically, they may want to ascertain how their members and high priority prospects rate their accessibility and convenience in terms of facility locations, hours of operation, and other features. Given current demographic trends, including more dual-career couples, single parents, and working women, accessibility and convenience may very well become primary attributes that consumers consider in selecting a health plan. A competitor's advantage in distribution and delivery might be very difficult to overcome in the longer run.

A final, somewhat speculative implication pertains to the individual health care professional and the organization in which he or she works. Specifically, certain managers may be better suited, more satisfied, and perform more effectively in organizations having a style

of strategic management that is closely aligned with their interests, motivation, and talents. Styles are relatively enduring and definitely affect the nature, orientation, and rewards of managerial work. Effectively matching personal style and organizational style is a challenge that both organizations and individuals must confront. A successful match between personal style and organizational style may result in lower turnover, higher productivity, and less on-the-job stress. Very little research has been initiated in this vital area.

CONCLUSIONS

Consumers, public policy makers, and corporate benefits managers are hoping that managed-care plans, notably HMOs, can help break the upward spiral in medical care prices. In the calendar year of 1986, medical care prices rose seven times faster than the CPI. HMOs streamline service delivery by requiring that members prepay their premiums. In return for prepayment, HMOs attempt to keep a "lid" on costs by emphasizing prevention and tightly controlling the medical care their members receive. Concomitantly, the large size of many HMOs enables them to benefit from economies of scale. If current projections prove correct, 100 million Americans will belong to an HMO by the mid-1990s.

Our study adds to an emerging knowledge base in health care management by examining the relationships between HMO pricing, HMO financial performance, and the strategic management styles of HMOs. Though no statistically significant relationships are found between strategic management style and the relative importance of pricing, statistically significant relationships are found between the effectiveness of price strategy planning and strategic management style. More specifically, prospector and analyzer HMOs have distinctive strengths in planning price strategy. Defenders and reactors

evaluate their price planning effectiveness as comparatively weak. The financial performance findings are consistent with previous research. Defender, prospector, and analyzer HMOs all perform well, whereas reactor HMOs exhibit poor financial performance.

Several implications for health care management are noted. First, HMOs are encouraged to assess their strategic management styles, conducting both diagnostic evaluations of their own organizations and comparative analyses of relevant competitors. Second, both defender and reactor HMOs are encouraged to improve their marketing orientation and price planning effectiveness. Defenders might be able to enhance and sustain their solid financial performance through stronger marketing efforts. Reactors might need to improve their marketing competence to survive. Further, marketing competencies might enable reactors to change their weak style. Third, distribution and delivery decisions are found to be more important in prospector and analyzer HMOs. Defender and reactor HMOs should consider this marketing thrust more intensively as distribution advantages may be very difficult to overcome in the long run. Finally, a potential relationship between individual managerial styles and organizational style is proposed.

Several directions for future research are suggested by our results. Specifically, future research in health care management might examine the following questions:

1. How are the pricing practices of HMOs affecting the pricing strategies of traditional health service providers?
2. How are pricing decisions actually made in HMOs that are recognized for their price planning effectiveness?
3. What are the relationships between the other components of functional marketing strategy

(promotion, service development, distribution) and strategic management style?

4. How do poorly performing organizations change their strategic management styles and what role can and should marketing play in this process?
5. What is the relationship between the characteristics of employees—especially top managers—and strategic management style?

Given the importance of strategic management planning processes and effective pricing decisions in the modern health care organization, both strategy and pricing studies must have high priority in health care marketing research.

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Reprint No. JHCM91104