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Revised

Does Relationship Marketing Pay?

An Empirical Investigation of Relationship Marketing Practices in Hospitals

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Abstract

Relationship marketing has been gaining momentum as business entities realize that short-term sales/transaction orientation has several pitfalls for building customer loyalty and continued patronage. Relationship marketing has the potential to improve marketing productivity (Sheth and Parvatiyar 1995a). Development and implementation of customer retention programs, partnering with customers, suppliers, and competitors, and other relationship marketing practices have become a way of life in the 1990s. What is the nature of relationship marketing practices adopted by hospitals in the United States? How do these practices correlate with the performance of such hospitals? These and related issues are the focus of this empirical investigation.

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Introduction

Faced with mounting pressures to contain costs and mandates to adopt continuous quality improvement processes, the health care industry is undergoing rapid restructuring and consolidation. An impact of this consolidation is the creation of integrated delivery networks that involve customer/supplier partnering and/or alliances between hospitals, physicians, HMOs, PPOs, insurers and customers. For example, in 1993 alone, hospitals formed more than 300 collaborative ventures (HCIA and DeLoitte and Touche, 1995). According to DeLoitte and Touche's survey, in 1995, about 81 percent of 1,191 hospital respondents said that they either participate in or have agreements with HMOs, as compared with 70 percent in 1992, and 48 percent in 1986. Similarly, 75 percent of 50 HMO plans surveyed by the Group Health Association of America (GHAA) said that they have formed or plan to form new affiliations with hospitals, physicians, PHOs, or other providers this year (HCIA, DeLoitte and Touche, 1995).

The growing trend of partnering with customers, suppliers and other service providers is not unique to the health care industry. In fact, relational partnering, network formation, alliances and other relationship marketing practices are becoming increasingly popular in many industries, particularly airlines, automobiles, computers, financial services, hospitality and telecommunications industries. However, in the health care sector, rapid adoption of relationship marketing is largely driven by the need to reform the health care delivery system or face the risks of closure. With improved medical technologies, in-patient days are declining and out-patient admissions are increasing, resulting in an overcapacity of beds and lower occupancy rates for hospitals. Throughout the 1980s, the average number of beds per hospital has declined along with lower

occupancy rates. During the past decade (1985 - 95), more than 100 hospitals per year have closed their doors. The mortality rate of rural hospitals is almost twice that of urban hospitals (AHA, 1995).

Thus, with increased competition and improved technologies, survival has become the name of the game in this industry. To survive, hospitals have to be more productive in meeting the health care needs of the people. With growing customer demand for quality health care service, many hospitals are seeking opportunities to engage in partnering relationships with other hospitals, physician groups, HMOs and similar health care providers so that they can share their resources and capabilities, thereby increasing efficiency in the system (Trombetta 1989). Hospitals can also enhance their effectiveness through partnering arrangements that provides them the capability to fully meet the needs of individual customers. Understanding individual customers' needs is easier when long-term relationships exists and are leveraged for longitudinal information about the customers' general and particular health conditions (Gould 1988).

Several factors are also facilitating hospitals to engage in relational partnering and relationship marketing activities. For example, the deployment of 'front-line information systems' (FIS) and the application of modern technology are making it easier for hospitals to conduct 'real time' diagnostics, shorter lab tests, and provide remote access to patient information. They can utilize the facilities and expertise of other health care providers; cross-sell each other's products/services; co-design and co-market new programs; instantaneously retrieve, update and share patient/customer information; engage in aftermarketing to provide post-treatment satisfaction; and offer full-line health care delivery programs to customers and corporate clients through channel integration.

With hospitals beginning to practice more relationship marketing it is important to assess whether such programs result in improved performance. As yet no empirical study has been conducted to determine whether it pays for hospitals to engage in relationship marketing and relational partnering. It is the objective of this exploratory

study to assess the performance of U.S. hospitals that engage in relationship marketing. This empirical study, based on a national sample, examines the nature of relationship marketing hospitals are currently practicing and correlates these practices with the hospital's overall performance.

What is Relationship Marketing?

Many definitions of relationship marketing have been offered in the literature. For example, Berry defines relationship marketing as: "attracting, maintaining and -- in multi-service organizations -- enhancing customer relationships" (1983, p.25). Grönroos (1990) and Shani and Chalasani (1993) define relationship marketing as an ongoing cooperative market behavior between an organization and consumers. Sheth and Sisodia (1995) propose that relationship marketing is based on "long-term mutually beneficial arrangements in which both the buyer and seller focus on value enhancement through the creation of more satisfying exchanges." Whereas, Morgan and Hunt (1994) have undertaken a more broader perspective of relationship marketing by including all cooperative relationships of a firm with its external and internal stakeholders.

Although a consensus on definition may not exist as yet, there is agreement that relationship marketing refers to collaborative and cooperative efforts among marketing actors (Sheth and Parvatiyar 1995a). Several marketing practices that attempt to establish, develop, or maintain ongoing cooperation with customers, and other marketing providers are included under the general rubric of relationship marketing. These include aftermarketing efforts (Vavra 1992), one-to-one marketing (Pepper and Rogers 1994), membership programs (including frequent buyer incentives), cross-distribution arrangements, cross-selling, co-production, co-branding, channel partnerships, logistics sharing, special supply arrangements (including special sourcing, and JIT arrangements), business alliances, database marketing, etc. (cf. Sheth and Parvatiyar 1995b). Hence, we define *relationship marketing* as

*the process of engaging in cooperative and collaborative arrangements
with customers, suppliers and other marketing infrastructure partners
to facilitate the delivery of superior customer value.*

Implied in this definition is an expectation that by delivering superior customer value marketers would be able to retain customers over long periods of time.

Today, relationship marketing is at the forefront of academic research and marketing practice (Berry 1995). However, much of the current research has focused on defining constructs and presenting conceptual models of relationship marketing. Some have been applied in the context of business-to-business marketing (Dwyer, Schurr, and Oh 1987; Johanson, Hallén, and Seyed-Mohamed 1991; Wilson 1995), channel relationships (Boyle, et. al. 1992; Ganesan 1994; Weitz and Jap 1995), or specific service industries (Crosby and Stephens 1987; Crosby, Evans, and Cowles 1990), etc. No research, with the possible exception of Kalwani and Narayandas (1995) in which the authors found a positive correlation between long-term relationships and profitability of suppliers, has yet empirically demonstrated the association or correlation between a company's adoption of relationship marketing programs and its performance.

The relevance of relationship marketing in health care has been widely recognized (Cassidy, et. al. 1993; Dunn & Thomas 1994; Naidu et. al. 1994; MacStravic & Denning 1986; Paul 1988). Wagner, et. al. (1994) discussed the relevance of relationship marketing programs, integrated marketing communication strategy, and data base marketing for developing a favorable image leading to improved hospital performance. Based on Demming's principles of total quality, Doyle and Bondreau (1989) advocated hospital-supplier partnerships as a means to improve productivity, to control costs, and to improve quality of care. They suggest that long-term relations with suppliers based on trust, service, and effective coordination could lead to efficiencies and improved performance. Dunn and Thomas (1994) draws clear distinction between transaction

selling and offering partnership solutions to customer problems and advocated partnering with customers with a hierarchy of corporate buying-selling model.

In the health care context, hospitals could engage in cooperative and collaborative arrangements with several groups of customers including, patients, payers and HMOs or PPOs. They could also partner with their suppliers, other hospitals and/or specialized health care service providers to enhance their offerings to customers. These arrangements could be broadly classified into three types of relationship marketing practices: (1) programs that are primarily aimed at retaining customers, for example activities to maintain on-going relationship with customers, benefits to frequent users of services and members of specific programs, after-marketing and post-treatment satisfaction services, patient focused care programs, database maintenance, and programs to involve customers into the design, development and sales activities of the hospital; (2) special supply and delivery arrangements with other health care providers and key suppliers, such as sourcing arrangements and just-in-time supply relationships, preferred supplier programs, health care network membership, integrated delivery systems, cross-selling and mutual referral of services, and sharing patient information; (3) relational partnering programs to leverage the resources of others, such as joint marketing/training programs, joint product/ process development, cross distribution arrangements, logistics/ facilities sharing, co-providing services, joint ventures and alliances.

Sheth and Parvatiyar (1992) suggest that business alliances and partnering arrangements are formed either for strategic or operational purposes. Strategic purpose alliances strive to improve the effectiveness of the organization by providing entry into new markets, help develop successful new products, improve the hospital's market position, and help in achieving rapid acceptance of new marketing programs by its customers. These in turn should increase customer loyalty and further improve the market position of a hospital. Operative purpose alliances are aimed at increasing marketing and organizational efficiency of the hospital by reducing operating and

developmental costs, reduce cycle time for introducing new and innovative products, achieve quality benchmarks, increase productivity and improve the hospital's operating processes, etc.

There are several external forces that are driving companies towards engaging in relationship marketing including, the total quality movement, the need to enter new markets, and changing customer expectations (Parvatiyar 1994). However, in the case of hospitals, the primary driver is the growing intensity of competition. Although there might still remain significant barriers that impede end users (patients) from switching, the hospital market is shifting from a market dominated by semi-monopolies to one characterized by intense competition. There are now moments when the switching barriers drop and patients can and do switch hospitals if they are not fully satisfied (Jones and Sasser 1995). Under these circumstances, many hospitals are engaging in relationship marketing to strengthen the satisfaction-loyalty relationship with patients, and further influence physicians, HMOs or insurers to deliver patients to them. According to Sheth (1994a), greater the competitive intensity faced by a company, greater is its desire to cooperate and collaborate with other industry partners. As competitive forces lead to loss of customers, there is a growing need to retain these customers. Reicheld and Sasser (1990) have demonstrated across a variety of service industries that when a company successfully lowers its customer-defection rate, its profits climb steeply.

Other studies, though not directly related to relationship marketing have emphasized the need for a market orientation and a more targeted marketing approach for hospitals. MacStravic (1984) advocated market segmentation based on customers' needs that strive to anticipate and exceed customers' expectations. O'Connor, et. al. (1994) identified through an empirical study that there is a gap between what the physicians think as service quality and customer expectations of service quality. They suggest that niche marketing and relationship marketing programs must be linked by a comprehensive

data base. Jaworski and Kohli (1993) examined a conceptual framework for the determinants of level of market orientation of firms and its impact on performance. Several studies found a positive relationship between marketing orientation of a health care facility and its performance (Wrenn 1989; Naidu and Narayana 1991). Sheth (1994b) suggested a 10-point normative model of customer satisfaction and retention that included a scale for self-audit by firms to measure its relationship orientation.

As far as the performance of a hospital is concerned, several financial and non-financial indicators have been used in various studies. McDermott, et. al. (1993) used operating margins as an indicator of hospital's profitability, and hence performance. Naidu, Narayana and Pillari (1991) and Naidu, Kleimenhagen and Pillari (1994) have used a variety of financial and non-financial measures, such as occupancy rates, gross patient-revenue per bed, return on assets, average admissions per bed, etc., to evaluate the performance of hospitals. The use of financial and non-financial measures to evaluate business performance is consistent with the recommendations made by Eccles (1991).

Conceptual Framework

Based on the above discussion, a conceptual framework for this study was developed which is presented as Figure 1 below. It is conceptualized that the competitive intensity, the nature of the hospital's organization, and the level of its marketing orientation will drive the hospital to form partnering relationships with customers, suppliers, and other health care providers. This in turn may impact the performance of hospitals in terms of occupancy rate, number of admissions per bed, gross patient revenues per patient day, net-income margins, total profit margins, and customer satisfaction. Several hypotheses derived from the framework are empirically tested in this study.

It is pertinent to point out that hospitals provide a unique setting for conducting an empirical study on relationship marketing. There are several parties who each play a

Figure 1: Conceptual Framework for Relationship Marketing

Intensity
of competition,
orientation, and
of a hospital in
its ownership

of
market
the nature
terms of
and

institutional objectives, drive hospitals to develop partnerships with customers, providers, HMOs/PPOs/payers, and suppliers so as to develop integrated delivery systems to create and maintain differential advantage in the market place. This may impact the performance of hospitals in terms of its occupancy rate, number of admissions per bed, gross patient revenues per patient day, net-income margins, total profit margins, and customer satisfaction.

different role in the use or delivery of hospital services. Consistent with the framework on customers developed by Sheth, Newman and Mittal (1996), hospitals have patients as users of their services, health insurance companies as payers for these services, companies and organizations act as institutional buyers, and HMOs, PPOs, IPAs, etc. that are co-producers and co-providers of hospital services. The HMOs, PPOs, IPAs, etc. could also be considered as hospital's customers in certain context and also become its suppliers in other situations. The network of relationships among all these parties and other hospital suppliers is very interesting and provides an excellent setting for research on impact of successful relationships between these parties on the hospitals performance.

Research Methodology

A survey instrument consistent with the objectives of the study was developed and pretested. The eight-page survey was divided into three parts: Part A dealt with relationship marketing practices with customers and suppliers; Part B dealt with marketing organization and orientation; and Part C primarily dealt with background information of the hospital and the respondent.

A stratified random sample of 1,231 hospitals were drawn from the HCIA data base covering a cross-section of all states and bed size. A supplemental sample of 448 hospitals were drawn from the 1994 AHA Guide to experiment on a limited basis the responsiveness to incentives (\$1, \$2 incentives, and a donation of \$5 to charity, and a control group with no incentives). A personalized letter addressed to the hospital administrator was sent in August of 1994, along with a reply envelope. A follow-up mailing was sent in September. Approximately 14 surveys were returned to the sender undelivered; 34 hospitals did not want to participate; and 26 were partially completed and judged to be unusable. This resulted in 205 usable responses (response rate of 12.8 percent) which served as the data base for the study.

Secondary data related to performance indicators, such as occupancy rate, return on equity, and select financial ratios, were requested from HCIA for these 205 hospitals. Eighteen hospitals could not be located on the HCIA data base as these were smaller hospitals that were not recognized for Medicare/Medicaid programs and, as such, were not required to disclose their financial data. This resulted in a full set of 187 hospitals on which we have extensive primary data as well as secondary data pertaining to performance indicators. It must be recognized that the sample of hospitals included in the study may not be a representative sample of all US hospitals. Many of the smaller hospitals returned the survey indicating that the survey was not relevant to them. Oftentimes, smaller hospitals, particularly the ones located in rural areas, may not be organized to facilitate the marketing function and, as such, may feel that the study is not relevant to them. These limitations on generalizability should be recognized. Yet, the interrelationships between variables relevant to relationship marketing shed some light on relationship marketing practices and their impact on performance indicators. The results may still be relevant to smaller hospitals as they are increasingly being acquired by large hospitals and corporate organizations who in turn would direct or influence a more sophisticated marketing approach in these small hospitals.

It may further be noted that hospitals with less than 100 beds represent nearly 43 percent of the total U.S. hospital population but account for only 12.5 percent of the beds. Larger hospitals (300 beds or more) represent 18 percent of hospitals and account for nearly 50 percent of beds. Representativeness of a sample may be based on number of hospitals or number of beds and may primarily depend on the study's purpose. In Table 1, a comparison of the study sample with the population of US hospitals is shown.

Operational Definitions

Intensity/Level of Relationship Marketing Activities:

The survey instrument listed 11 popular relationship marketing activities with an option to list other activities not listed therein. Respondents were asked to check as many applicable activities for which their hospital have specific programs. Based on the number of activities checked, and by dividing the sample into three fractiles using the number of activities as scores, the following operational definition of relationship intensity is used:

Number of programs checked	≤ 4:	Low intensity/level
	5-7:	Moderate intensity/level
	≥ 8:	High intensity/level

Marketing Orientation:

The survey listed 18 statements related to management philosophy and marketing orientation. Respondents were requested to rate each item on a scale, zero to ten (0=hospital does not possess the characteristic, ..., 10=hospital possesses the characteristic to the maximum possible degree). The total score obtained by summing the 18 items is defined as follows:

Total score	≤ 79:	Low marketing orientation
	80-124:	Moderate marketing orientation
	≥ 125:	High marketing orientation

The cutoff points are defined by arranging the range of scores into three fractiles, so as to contain at least 25 percent of the observations in any category and to facilitate minimum requirements for the chi-square analysis.

Intensity of Competition:

Respondents were asked to indicate overall competitive intensity in their service area: Nonexistent, moderate, intensive, or very intensive. This is a subjective measure based on the perception of the respondent.

Performance Indicators:

The following definitions are directly obtained from the HCIA data base on select secondary data for the sampled hospitals.

$$\text{Occupancy rate} = [\text{Inpatient days} / \# \text{ of beds} \times 365] \times 100$$

$$\text{Admissions per bed} = (\# \text{ of Admissions, Acute Care}) / (\# \text{ of Beds in Service})$$

$$\text{Net income margin} = [(\text{Net Income}) / (\text{Total Operating Expense})] \times 100$$

$$\text{Gross patient revenue per patient day} = (\text{Gross Patient Revenue}) / (\text{Adjusted Patient Days})$$

$$\text{Total profit margin (\%)} = [(\text{Net Income}) / (\text{Net Patient Revenue} + \text{Other Revenue})] \times 100$$

$$\text{Uncollectible ratio} = [(\text{Gross Patient Revenue} - \text{Net Patient Revenue}) / (\text{Gross Patient Revenue})] \times 100$$

Profile of Respondents

About 22 percent of the respondents represented hospitals with less than 200 beds; 37 percent were hospitals with 200 to 399 beds; and 41 percent represented general hospitals with 400 or more beds (Table 2). Nearly three-quarters (74 percent) represented "not-for-profit" hospitals and 19 percent were government (non-federal) hospitals and six percent were "investor-owned" hospitals. About 45 percent of them were affiliated with a medical school. Some 84 percent of them had a marketing department and one-in-six was a stand-alone department with the rest either combined with public relations or strategic planning or other functional areas. About one-third of

the respondents were hospital Administrators/CEO/president and the balance were top management personnel (vice president, director, manager).

Relationship Marketing Practices in Hospitals

About 60 percent of the respondents were either "familiar" or "very familiar" with the relationship marketing concept; some 28 percent were "somewhat familiar" while 12 percent were "not familiar" (Table 3). Many of the responding hospitals indicated that they engaged in relationship marketing programs. The most frequently mentioned programs in place were post-treatment satisfaction and after-marketing activities - 77 percent; develop/maintain on-going relationships with HMOs/PPOs/physicians/payers - 76 percent; customer retention programs - 72 percent; joint ventures/alliances/partnerships, etc. - 71 percent; and data base marketing - 65 percent.

The objectives for developing relationship marketing programs seem to differ by partners. The primary objective for developing relationship marketing with patients is to increase customer satisfaction; with HMOs/PPOs/IPAs and payers, it is to develop a strategic market position; and with suppliers it is to reduce operating and developmental costs. Approximately two-thirds of the respondents seem to indicate that relationship marketing programs are successful and only one in four tend to indicate that they were about to break or dissolve their program(s).

The respondents were asked to check specific programs their hospital has implemented thus far and whether the program is considered to be successful. Table 4 presents some eighteen programs which the respondents indicated have been implemented along with their subjective judgment of their success. Five programs that were implemented by at least 50 of the respondents in the order of popularity were:

- Satisfaction measurement programs
- Joint ventures/partnerships/alliances
- Integrated delivery programs

Data base maintenance programs

Patient focused care programs

The success rate of these programs as assessed by the respondents was quite high.

Drivers of Relationship Marketing

Based on the literature review and the hypothesized relationships presented in the conceptual model a greater intensity of relationship marketing are likely to be observed in hospitals that face a greater intensity of competition, or have a higher level of marketing orientation, etc. Thus the following three hypotheses were tested:

Hypothesis 1: *To the extent higher intensity of competition is faced by a hospital, there will be a greater intensity of relationship marketing activities adopted by them.*

Hypothesis 2: *With higher marketing orientation a hospital will have greater intensity of relationship marketing activities.*

Hypothesis 3: *To the extent there is a formal marketing department in a hospital there will be a greater intensity of relationship marketing in that hospital.*

We found support for all three hypotheses. Table 5 presents data on the perceived level of competition faced by the hospital and the intensity of relationship marketing programs implemented by that health care facility. The analysis clearly demonstrates that these two variables are not independent and that relationship marketing intensity increases significantly when competition is high and/or moderate. The association/relationship between level of competition and level of relationship marketing programs is significant at a p-value of less than .0001. This seems to indicate that as the level of competition intensifies, hospitals tend to initiate partnership/cooperative programs with customers,

HMOs/PPOs/physicians, payers, and suppliers. This is consistent with the proposition of Sheth (1994a) and others.

Table 5 also shows the percentage distribution of responses by marketing orientation and level of relationship marketing intensity of the hospital. The analysis clearly demonstrates that these variables are dependent. Higher marketing orientation tends to be associated with higher levels of relationship marketing activities. The relationship is significant at a p-value of less than .002. Hospitals that are very customer-oriented seem to initiate and maintain several relationship marketing programs that are consistent with this management philosophy.

Relationship marketing practices are often dependent on the marketing executive who is knowledgeable about current trends and practices not only in health care but also in the entire business world. Often, such talent may be hired by larger hospitals who have an organizational slot for functional responsibilities. It is clearly inferred from Table 5 that 83 percent of the hospitals with a marketing department have moderate or high relationship marketing intensity as compared to only 18 percent for hospitals with no marketing department. The relationship is highly significant with a p-value of less than .0001.

Relationship Marketing and Hospital Performance

In general it is expected that relationship marketing would improve the performance of hospitals. In a declining market, one of the major problems faced by hospitals is decreased utilization of bed size capacity. On a typical day, more than one-third of the hospital beds are empty. Improved procedures, greater emphasis on out-patient services, and pressure to contain costs have contributed to lower patient-days per hospital admission. Thus lower occupancy rates often directly affect the hospital's bottom line. However, if relationship marketing is aimed at retaining customers and facilitating future marketing activities, hospitals that engage in them are likely to see a relative superiority in maintaining its occupancy rates over other hospitals. Such

hospitals will also draw more patients given the satisfaction of those who have previously been served by them and the subsequent favorable word-of-mouth publicity. Thus we test the following hypothesis:

Hypothesis 4: *Hospitals with higher level of relationship marketing activities will have a greater occupancy rate.*

Table 5 clearly indicates that hospitals that engage more in relationship marketing tend to have better occupancy rates. Below 50% occupancy is most prevalent among hospitals that have low intensity of relationship marketing, whereas higher levels of occupancy is more prevalent among hospitals that have high relationship marketing intensity. Low levels of relationship marketing activities had an occupancy rate of 63.5 percent as compared to hospitals with a higher level of relationship marketing activities that had an occupancy rate of 65.2 percent. The relationship between higher occupancy rates and higher level of relationship intensity is significant at p-value of less than .03.

Closely related to occupancy rate is another performance indicator - admissions per bed. Relationship programs with customers, such as HMOs/PPOs/physicians/payers directly enhance the opportunities for repeat purchases and increased loyalty. Not only will these HMOs, PPOs, physicians and others recommend their patients, other patients and customers will also be attracted to the hospital due to the favorable image generated by relationship marketing programs. In turn, increased admissions per bed will improve the bottom line of the hospital by improving its cash flow and providing higher return on equity or assets. Thus, the following hypothesis:

Hypothesis 5: *The number of admissions per bed will be greater in hospitals that have a higher level of relationship marketing programs in place.*

Once again, Table 5 indicates that there is a significant relationship (p-value less than 0.0001) between number of admissions per bed and the level of relationship marketing activities in a hospital. The median admissions per bed in a hospital with low levels of relationship marketing is 25.7 percent as compared to 35.5 percent for hospitals with higher levels of relationship marketing programs. From the table it is also clear that over 80% of hospitals that registered more than 30 admissions per bed have moderate to high relationship marketing intensity.

Given the time lag and general policy of hospitals that patients do not necessarily pay at the time they receive hospital services, and also the fact that most users of hospital services are not direct payers themselves, uncollectible ratios could be significant and cause for major financial problems for hospitals. It is expected that hospitals who engage in partnering relationships with its customers, HMOs/PPOs/physicians, payers, and suppliers are likely to experience lower uncollectible ratios than those that do not practice relationship marketing. Customers are likely to be more responsive towards meeting their responsibilities of payment for services when they have a long-term relationship with that hospital. They likely to be more motivated towards maintaining the financial health of their favorite health care facility so that they may continue to receive superior service. Therefore, we test the following hypothesis:

Hypothesis 6: *Hospitals with higher intensity of relationship marketing activities will have lower uncollectible ratio.*

Table 5 supports this hypothesis with a p-value of .03. The median percent of uncollectible ratio for hospitals with a low intensity of relationship marketing activities is 36.5 percent as compared to 34.4 percent for hospitals with a high level of relationship marketing intensity. However, it is worth noting that the lowest level of uncollectible ratios (less than 25%) is most common among hospitals that have low level of

relationship marketing activities. This may be because hospitals that are not that customer relationship-oriented could be driven by short-term financial results and are aggressive in collecting service charges as soon as possible without caring as much for the long-term relationship with their customers or patients.

Selectively targeting at the more profitable customers is one of the ways to practice relationship marketing. By tailoring customer service to profitable customers and by instituting patient focussed programs, hospitals should be able to increase their gross patient revenue per patient day. Gross revenues should also increase because of improved customer satisfaction and customer loyalty in relationship marketing.

Hypothesis 7: *Gross patient revenue per patient day will be higher in hospitals with a greater intensity of relationship marketing.*

As evidenced in Table 5, relationship intensity and gross revenue per patient day is significantly related with a p-value of less than .002. The mean revenue per patient day is \$1,300 for hospitals with a low level of relationship marketing programs as compared to \$1,862 for those with a higher number of relationship marketing activities. About 57% of hospitals who gross less than \$1075 per patient day have low relationship marketing intensity, whereas 85% of hospitals that gross over \$2075 per patient day have either moderate or high relationship intensity. Based on the above results, we can conclude that the level of relationship marketing activities of a hospital and their performance on financial and non-financial indicators are positively associated.

Relative Impact of Different Types of Partnering

It is pertinent to know what specific partnering programs contribute most towards the overall performance of a hospital. Since relational partnering programs are developed with customers, suppliers and other health care providers or payers, etc.,

knowing their relative impact on a hospital's performance would be most useful in planning future programs. It would also help in developing realistic expectations as to what results should be expected from different types of partnering programs. To consider performance of different types of relationship marketing programs, such as partnering with customers, partnering with providers/payers, and partnering with suppliers, several relational partnering programs were summed over the binary scale (1,0) and low and high levels of partnering programs were operationally defined. These were then associated with six performance indicators: occupancy rate, admissions per bed, net income margin, gross patient revenue per patient day, total profit margin, and the uncollectible ratio, in order to test the following hypotheses:

Hypothesis 8: *Overall performance will be greater for hospitals that engage in a higher number of partnering programs with customers.*

Hypothesis 9: *There will be a greater utilization of facilities (occupancy rate and admissions per bed), higher gross patient revenue, better profit and net income margin, and lower uncollectible ratios for hospitals that have a greater number of partnering programs with providers and payers.*

Hypothesis 10: *The overall performance of the hospital will be dependent on the number of partnering programs they have with their suppliers.*

As shown in Table 6, those who are engaged in a higher level of partnering with customers seem to improve their overall performance. On all six performance indicators, hospitals with a higher number of partnering programs with customers performed significantly better than those who had a lower number of partnering programs with customers. The most significant difference between those who have high levels of

customer partnering versus those that have less are in the areas of occupancy rates achieved, admissions per bed, gross revenue per patient day earned and the total profit margin. The least difference appear in the areas of net income margin and in the uncollectible ratio. This could be because of the high costs of running several partnering programs with customers and also because focus on building long-term relationship with customers may lead to compromises on short-term profitability.

We found only a partial support for Hypothesis 9. As indicated in Table 6 (Row B), partnering programs with providers and payers seem to contribute to higher utilization of facilities (occupancy rate and number of admissions per bed) but has marginal impact on financial performance indicators. A couple of financial performance indicators such as profit margin and gross patient revenue per patient day are marginally significant at the 0.05 and 0.08 level of significance. This may imply that in the short term partnering with other providers may have an anemic impact. However, hospitals can benefit in the long run through better utilization of facilities as more patients are brought through partnering arrangements with HMOs and PPOs.

The incidence of hospital partnering with suppliers tends to be low and so is its impact on performance indicators. Only hospital facilities utilization (occupancy rate and admissions per bed) is marginally significant and that may be due to concurrent partnering programs with customers and payers. Relative to the hospital budget, the supplier budget in some cases may be too small to have a significant impact on financial performance indicators. Or, it is possible that the relative unsophistication in supplier partnering may not have yielded significant results as yet. Partnering with suppliers do have the potential to provide such benefits as reduction in procurement costs, lower developmental costs, etc., that we have not measured here. Thus, even though our hypothesis testing leads to the proposition that supplier partnering and overall hospital performance are independent, a different set of measures could prove otherwise.

Impact of Specific Relationship Marketing Programs

The association of specific relationship marketing programs with several performance indicators is shown in Table 7. As the results indicate, many relationship marketing programs have multiple impacts. For example, ongoing relationship with patients as customers lead to significant increase in gross patient revenue per patient day, net income margin and total profit margin. Similarly, relationships with HMOs/PPOs/physicians and payers have significant impact on admissions per bed and gross revenue per patient day. However, they also tend to significantly lower the net income margin of hospitals, primarily because these managed care relationships may often involve "deep discounts", "carve outs" and "capitation fees" to physicians and HMOs.

Use of databases for marketing purposes impact such performance areas as, occupancy rates, admissions per bed, net income margin, gross revenue per patient day, and total profit margin. Cross-selling other services to regular customers result in higher occupancy rates, higher number of admissions per bed, and improvement in gross revenue per patient day. Programs that provide network and membership benefits positively impact the utilization of hospital facilities by increasing occupancy rates and admissions per bed. Similarly, after-marketing and post-treatment satisfaction services reduces the uncollectible ratio and increases number of admissions per bed. Joint marketing with other health care providers increase occupancy rates, whereas cooperative management of logistics with other organizations impact the gross patient revenue per patient day. Finally, joint ventures and alliances with other health care providers increase the facilities utilization and reduces uncollectible ratio.

Two programs have no significant impact on any of the six performance indicators tested. They are: (i) involving customers/suppliers for design/development and sales activities of hospitals; and (ii) joint product/service development with customers, suppliers and other organizations. This maybe due to the fact that unlike manufacturing and consumer service organizations, customers usually rely on the expertise of the health

care professionals for the design and delivery of care services. There is less enthusiasm towards becoming involved in the process of design or development of new products and services at hospitals.

The above analysis is exploratory in nature and cause and effect of these programs cannot be directly established. Assuming the absence of any other major initiatives, these programs are indirectly identified as influencing the performance indicators.

Managerial Implications

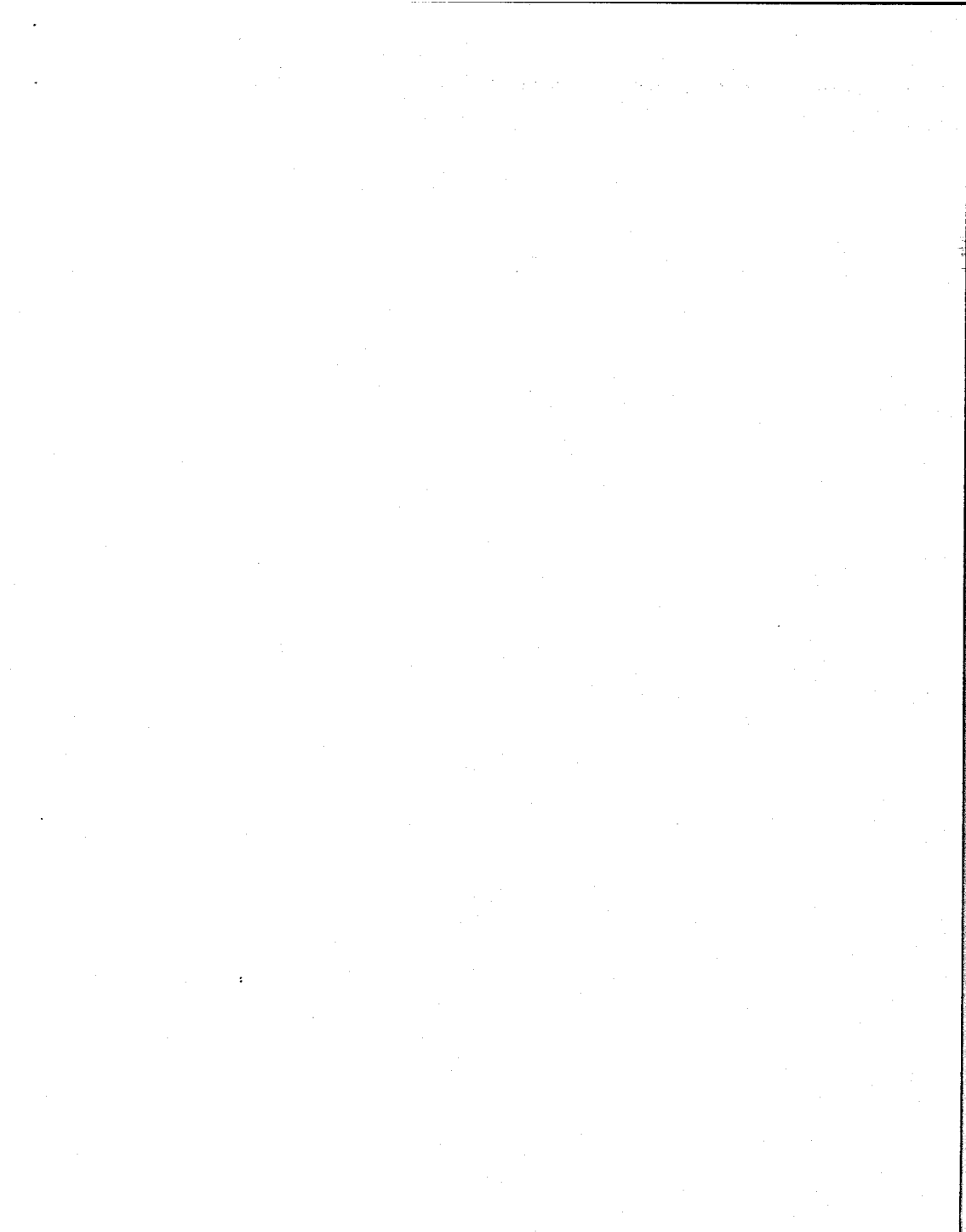
As competition intensifies in the hospital market, drop in customer loyalty is likely to become steeper unless hospitals place emphasis on patient satisfaction (Jones and Sasser 1995). One way hospital systems are going to respond to the growing competition is by engaging in relationship marketing activities and by partnering with their suppliers and other health care providers, including competitors. Thus, the answer to intense competition is not rivalry but cooperation. By developing cooperative relationships with customers, suppliers and other health care providers, hospital systems can overcome the challenges of competitive threat. Similarly, it can also be implied that in order to rapidly engage in relationship marketing activities systems must become more market and marketing-oriented because such orientation is more likely to foster the adoption of relationship marketing and partnering programs.

Many hospitals in the U.S. are engaged in the practice of relationship marketing. The larger the hospital, the more the likelihood that it is implementing a higher level of relationship marketing programs. Although the objectives for developing partnerships with customers and suppliers differ, the primary focus is to meet or exceed customer expectations in service quality, and delivery. While results of these efforts are likely to be long term, the study indicates that those hospital systems that are engaged in relationship marketing have superior performance in such areas as, occupancy rates and better cash flows. Relationship marketing programs with customers seem to be the most effective

followed by partnering programs with providers. The impact of relationship marketing programs with suppliers tends to be anemic with respect to hospital performance indicators. As hospitals struggle to survive in the changing landscape for health care, initiation and successful management of relationship programs with customers and providers may enhance their likelihood for survival and success.

Results presented in Table 7, can be used by managers and other decision-makers to improve their hospital's performance. For example, to enhance occupancy rate, hospital systems can engage in the use of database marketing, cross-selling of services to regular customers, design network and membership benefit programs for customers, engage in joint marketing with other health care providers, or establish joint ventures and alliances with them. Similarly, for increasing admissions per bed which is an important indicator of success in a highly managed care market, such relationship marketing programs as after-marketing aservices, ongoing relationship with HMOs, PPOs, physician groups and payers, as well as programs identified for the enhancement of occupancy rates would be recommended.

In order to increase net income margin, relationship with patients and the use of database marketing are likely to yield the best results. However, any gains in improving net income margin through these efforts may be frustated by the existence of managed care relationships with HMOs/PPOs/IPAs and payers who receive deep discounts. Gross patient revenue per patient day could be significantly increased through ongoing relationships with all groups of customers, by the use of database marketing and cross-selling activities and through cooperative management of logistics with other organizations. To improve total profit margin, hospitals are best advised to develop and maintain on-going relationship with patients and use database marketing programs. Finally, to reduce the uncollectible ratio, post treatment satisfaction and after-marketing activities could be started alongwith the formation of joint ventures and alliances with other health care providers.



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**Table 1: Sample Representation of the Population
(percentage distribution)**

Hospital Bed Size	Sample	Population (% of beds represented)	Population (% of hospitals)
Less than 100 beds:	13	14	46
100-199 beds:	9	20	25
200-399 beds:	37	33	20
400 and over beds:	41	33	10

Table 2: Profile of Respondents

1. Hospital Bed Size	
Less than 100 beds:	24(13)
100-199 beds:	17(9)
200-399 beds:	70(37)
400 and over beds:	76(41)
Total	187(100)
2. Hospital Ownership	
Government: Non-federal (state/county/city, etc.):	36(19)
Non-government: Not-for-profit:	139(74)
Investor owned:	11(6)
No response:	1(1)
3. Medical School Affiliation	
Affiliated with medical school:	84(45)
Not affiliated with medical school:	102(55)
No response	1(1)
4. Marketing Department	
Has marketing department:	158(84)
Has no marketing department:	28(15)
No response:	1(1)
5. Organization of Marketing	
Standalone department:	26(14)
Combined with PR:	81(43)
Combined with other functions:	51(27)
No response/not applicable:	29(16)
6. Survey Respondent	
President/CEO/administrator:	60(32)
Vice president/director of marketing:	7(4)
Director/public relations/communications:	71(38)
Other (upper/middle management):	49(26)

(): Percentage of total respondents

Table 3: Relationship Marketing Practices of Hospitals

1. Familiarity with Relationship Marketing	
Not familiar:	22(12)
Somewhat familiar:	52(28)
Familiar:	73(39)
Very familiar:	40(21)
2. Top Five Relationship Marketing Programs being Implemented by Hospitals	
Post-treatment satisfaction and after-marketing activities:	144(77)
Developing and maintaining on-going relationships with HMOs/PPOs, physicians, payers:	143(76)
Developing and maintaining customer retention programs:	134(72)
Joint ventures/alliances/partnerships, etc.:	134(72)
Use of data bases for marketing purposes:	122(65)
3. Top Three Objectives for Forming Relationship Marketing Programs	
A. Patients	
• Increase customer satisfaction:	168(90)
• Improve total quality:	152(81)
• Increase customer retention/loyalty:	150(80)
B. HMOs/PPOs/IPAs	
• Develop strategic market position:	127(68)
• Improve total quality:	110(59)
• Enter new markets/increase customer satisfaction:	105(56)
C. Payers	
• Develop strategic market position:	110(59)
• Improve total quality:	101(54)
• Enter new markets/increase customer satisfaction:	99(53)
D. Suppliers	
• Reduce operating and developmental costs:	100(53)
• Acquire technology/knowledge:	84(45)
• Improve total quality:	81(43)
4. Dissolution/Break of Relationship Marketing Programs during Past Three Years	
Break/dissolve:	39(21)
Did not break/dissolve:	105(56)
No response:	43(23)
5. Excellence in Relationship Marketing (0: Poor, ..., 10: Highest in excellence)	
≤ 4:	45(24)
5 - 7:	85(45)
≥ 8:	35(19)
No response:	22(12)

(): Percentage of total respondents

Table 4: Relationship Marketing Programs Implemented by the Responding Hospitals

Relationship Marketing Programs	Number of Hospitals Implementing the Program	% of Hospitals Engaged in the Program	Likelihood of Success (success ratio)*
Satisfaction measurement programs	140	74.9	97.1
Joint ventures/partnerships/alliances	119	63.6	98.3
Integrated delivery programs	102	54.5	94.1
Data base maintenance	97	51.9	94.8
Patient focused care programs	97	51.9	96.9
After-marketing activities	81	43.3	95.1
Joint product/service/process development	73	39.0	95.9
Logistics/information/facilities sharing	73	39.0	94.5
Granting preferred supplier status	72	38.5	98.6
Cross-selling	72	38.5	95.8
Joint marketing/training programs	68	36.4	98.6
Just-in-time supply relationships	65	34.8	98.5
Involving relational partners in corporate decisions	61	32.6	96.7
Mutual referral services	59	31.6	96.6
Co-provider service	55	29.4	98.2
Cross-distribution services	40	21.4	97.5
Granting strategic account status	28	15.0	92.9
Frequent user programs	27	14.4	92.6

*Success rate = (# of successful programs/total responses) x 100. Successful programs are based on subjective judgment of respondents.

Table 5: Intensity of Relationship Marketing Programs in a Health Care Facility and Its Association with Select Variables

	Proposition #	Relationship Marketing Programs Percent of Response					
			Low	Moderate	High	Chi-square	p-value
a) Competition:	1	Low Moderate High	46 17 15	35 28 29	19 54 56	27.71	< .0001
b) Marketing orientation:	2	Low Moderate High	43 24 12	27 39 28	30 38 60	16.95	< .002
c) Marketing department:	3	Yes No	18 82	35 11	48 7	49.77	< .0001
d) Occupancy rate:	4	< 50% 50- 65% 65-75% 75%	46 17 22 36	32 32 30 26	22 51 48 38	14.06	< .03
e) Uncollectible ratio:	5	< 25% 25-35% 35-45% 45%	44 15 26 34	31 33 27 37	25 52 17 29	13.9	< .03
f) # of admissions per bed:	6	< 20 20-30 30-40 40	65 24 20 16	21 34 31 36	15 41 49 48	29.85	< .0001
g) Gross patient revenue per patient day:	7	< \$1075 1075-1575 1575-2075 2075-2575 > 2575	57 25 22 14 15	22 38 33 24 40	22 38 45 62 45	25.04	< .002

**Table 6: Hospital Partnering Programs with Customers, Providers, and Suppliers:
Impact on the Bottomline**

Partnering Programs	Proposition #	Performance Indicators					
		Occupancy Rate	Admissions per Bed	Net Income Margin	Gross Patient Revenue per Patient Day	Total Profit Margin	Uncollectible Ratio (%)
A. With customers	8						
Low		58.96	26.88	4.08	\$1547	3.45	34.5
High		63.86	35.01	5.71	\$1904	5.01	35.5
p-value		.0063	.0001	.0373	.0003	.0074	.0141
B. With providers/payers	9						
Low		60.17	29.18	4.23	\$1612	3.70	34.3
High		63.36	33.96	5.81	\$1894	4.99	35.8
p-value		.0156	.0032	.1116	.0832	.0502	.1232
C. With suppliers	10						
Low		60.23	29.83	4.75	\$1629	4.14	35.0
High		64.04	34.14	5.44	\$1935	4.68	35.2
p-value		.0944	.0416	.8101	.1233	.6243	.4004

Source: Primary Data and HCIA Hospital Database.

Hospital partnering programs with customers:

Programs each (1,0): (a),(c),(d),(e),(f),(g),(Table 6); sum 3 = low; sum > 3 = high

Hospital partnering programs with providers:

Programs: (b),(h),(i),(j),(k),(Table 6); sum 2 = low; sum > 2 = high

Hospital partnering programs with suppliers:

Programs: (q),(i),(j); sum 1 = low; sum > 1 = high

Table 7: Relationship Marketing Programs and Their Impact on Select Performance Indicators

Relationship Marketing Programs:	Hospital Performance Indicators						
	Occupancy Rate	Admissions per Bed	Net Income Margin	Gross Patient Revenue per Patient Day	Total Profit Margin	Uncollectible Ratio (%)	
a) Developing and maintaining on-going relationships with patients as customers	Yes	62.6	32.8	5.7**	\$1774*	5.0**	34.6
	No	59.9	28.5	3.4	\$1705	2.8	36.6
b) Developing and maintaining on-going relationships with HMOs/PPOs/physicians/payers	Yes	61.8	32.6**	4.8**	\$1838**	4.2	35.1
	No	61.7	28.3	5.6	\$1475	4.9	35.1
c) Use of data bases for marketing purposes	Yes	63.8*	34.2**	5.8**	\$1881**	5.2**	35.4
	No	58.0	26.6	3.5	\$1512	2.8	34.5
d) Cross sellings of other services to regular customers	Yes	64.3**	33.3*	5.1	\$1915*	4.5	36.5
	No	59.9	30.1	5.0	\$1630	4.3	34.0
e) Network and membership benefit programs	Yes	61.0*	34.1**	5.0	\$1829	4.3	35.0
	No	62.5	29.2	5.0	\$1684	4.4	35.0
f) Post treatment satisfaction and aftermarketing activities	Yes	62.8	32.6*	5.0	\$1774	4.3	34.2*
	No	58.4	28.3	5.3	\$1690	4.4	38.0
g) Involving customers/suppliers for design/development and sales activities of hospitals	Yes	64.5	34.1	4.6	\$1931	3.9	36.0
	No	59.9	29.8	5.3	\$1629	4.6	34.4
h) Joint marketing with other health care providers	Yes	63.0*	31.7	5.2	\$1800	4.4	34.4
	No	60.3	31.4	4.8	\$1697	4.3	36.0
i) Joint product/service development with customers, suppliers, and other organizations	Yes	63.3	33.1	5.5	\$1828	4.8	35.3
	No	60.0	30.4	4.7	\$1696	4.0	34.9
j) Co-operative management of logistics, inventory/processes with other organizations	Yes	62.9	32.3	5.6	\$1926*	4.7	34.9
	No	61.2	30.8	4.7	\$1657	4.2	35.2
k) Joint ventures/alliances/partnerships	Yes	62.6**	33.0**	4.8	\$1830	4.1	35.3*
	No	59.7	27.9	5.8	\$1558	5.1	34.4

*Significant at = .05; **significant at = .01