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USING IMPORTANCE-PERFORMANCE ANALYSIS TO DEVELOP HEALTH CARE MARKETING STRATEGIES*

Importance-performance analysis is a useful marketing research technique that can be easily and effectively applied in the health care sector to suggest successful marketing strategies. This article describes how this procedure was used to develop marketing strategies for hospital obstetric services in a southwestern community.

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INTRODUCTION

Almost everyone now agrees that marketing has a legitimate role in the provision of health care services. Recognizing the usefulness of the marketing concept in this sector of the U.S. economy is a critical factor in improving patient satisfaction and organizational effectiveness.

Translating this acceptance of the marketing concept into successful strategies designed for particular health care markets, however, is a formidable challenge. Decision-makers are sometimes inexperienced and poorly trained in the application of marketing philosophies (Clark, 1978). Furthermore, the results of some types of marketing research may be interesting but not very useful for purposes of strategy development. For example, a segmentation study may indicate that the average age of a certain hospital's patients is 45 years. Longitudinal and comparative analysis of this variable may provide some insights into the age composition of the local health care service area, but strategists may find it difficult to utilize this information to improve the hospital's marketing activities.

Importance-performance analysis is a marketing research procedure that has great potential in the health care sector. The usefulness of the procedure has already been demonstrated in the following markets: automotive (Martilla and James, 1977); food (Sethna, 1982); housing (Hawes, Kiser and Rao, 1982); and educational services (Hawes and Glisan, 1983). Importance-performance analysis is easy to use and offers considerable value to health care marketers. This article describes the procedure and presents the results of an application of importance-

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performance analysis to the development of health care marketing strategies for hospital obstetric services in a Southwestern community.

IMPORTANCE-PERFORMANCE ANALYSIS

Importance-performance analysis involves the concurrent examination of patient views of the importance of salient attributes *and* attitudes concerning the performance of marketers in satisfying consumer needs relating to each of these factors. Measures of attribute importance are useful information when developing resource allocation priorities in health services organizations (Flexner, McLaughlin and Littlefield, 1977). Likewise, data representing patient satisfaction with the performance of a health care institution in providing particular features may identify certain areas that are in need of improvement, as well as document organizational effectiveness in providing other services (Mitra and Smith, 1979). The key advantage offered by importance-performance analysis, however, is the synergistic effect of their simultaneous examination of these measures.

Importance-performance analysis is a marketing research technique that involves the analysis of consumer attitudes toward key attributes or characteristics of the product, service or organization being studied. Salient attitudes represent the consumer's evaluative criteria in product choice. They can be defined as the critical dimensions of any marketing strategy such as high quality, low price, informative advertising, convenient location, etc.

Each application of importance-performance analysis must begin with an identification of salient attributes that are relevant to the situation being examined. The search for these attributes usually involves a review of the literature, and often includes preliminary depth interviews with knowledgeable persons working in the industry. Focus group interviews with consumers may also help identify features of the product or service that are worthy of subsequent research attention.

Once an exhaustive list of salient attributes has been finalized, the importance and performance scales must be developed. The population must also be defined and a sample selected. The surveys are then administered and the responses are analyzed. After the list of salient attributes has been determined, the research procedure

is similar to most other marketing applications of survey research. These general issues are discussed in detail by Zikmund (1982), and special considerations within the health care industry are examined by Clarke and Shyavitz (1981), and by Ludke et al. (1983).

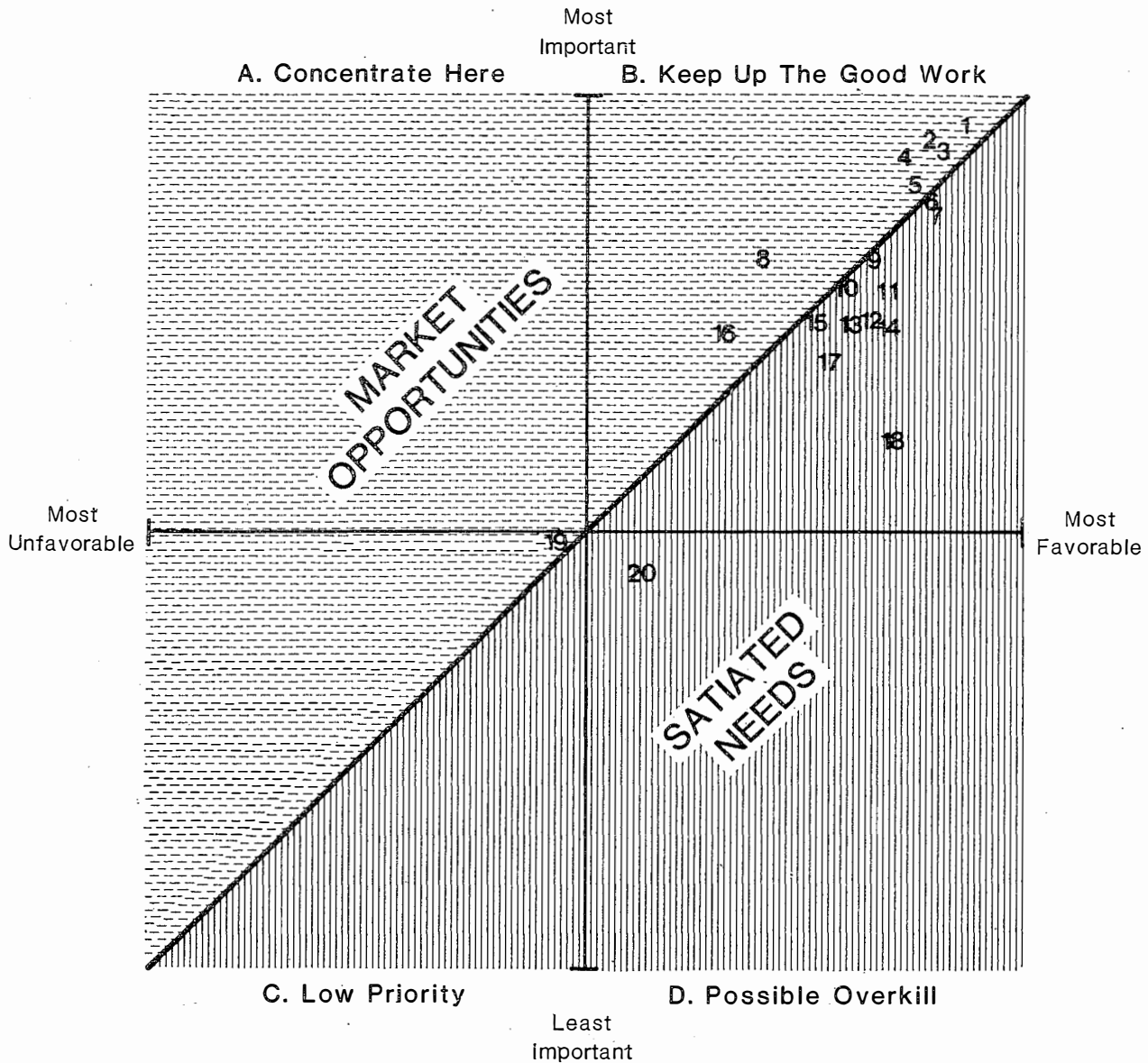
The data analysis in an importance-performance study is conducted in the following manner. Mean values for each attribute's importance and its performance are computed. A two-dimensional graph, with the importance scale representing the vertical axis and the performance scale constituting the horizontal axis, is then constructed (see Figure 1). The mean importance value and the mean performance rating for each attribute are plotted as points on the importance-performance grid. The position of a plot on the grid indicates the appropriate strategy for each attribute: concentrate here, keep up the good work, low priority or possible overkill.

Martilla and James (1977) contend that positioning the vertical and horizontal axes on the grid is a matter of judgment, and that the placement should suggest relative rather than absolute levels of importance and performance. The authors believe, however, that the importance-performance grid should be constructed so that each of the axes intersects at the other's midpoint. When this is the case, a 45-degree diagonal line through the B and C quadrants represents points where the importance and performance ratings would be equal. Any attribute that is plotted *above* this iso-rating diagonal would have an importance rating that exceeds its performance measure. Consequently, consumers would not be optimally satisfied with this feature and any marketer who could do a better job of providing this attribute would find a receptive market. Thus, any attributes on the grid above the iso-rating diagonal represent "market opportunities."

On the other hand, any attribute that is plotted *below* the iso-rating diagonal would have a performance rating that exceeds its importance value. Very little consumer dissatisfaction would exist in this case, and it is unlikely that a marketer could gain a competitive edge with a strategy that emphasizes superior provision of this attribute. Consequently, attributes plotted below the diagonal represent "satiated needs."

Importance-performance analysis is a very parsimonious method, and offers many practical advantages over other competing research methodologies such as qualitative research, projective techniques, paired-com-

FIGURE 1
Importance-Performance Grid^(a)



^(a) See Table 1 for a description of each attribute.

comparison scales, multidimensional scaling, conjoint analysis or the repertory grid. Some of the more important advantages of importance-performance analysis include simplicity and ease of application, ready specification of recommended strategic action and low cost. To date, however, there is no evidence to indicate that researchers have used importance-performance analysis

to develop health care marketing strategies. The authors' objectives in this article include encouraging the use of this very pragmatic approach in the health care sector by describing its utility and ease of application in developing marketing strategies for obstetric services. In addition, the results of the empirical study included in this article should be of interest to health care practitioners.

MARKETING OBSTETRIC SERVICES

The market for obstetric services presents an interesting health care sector in which to demonstrate the application of importance-performance analysis. Unlike some other health care services such as trauma centers, for example, patients have a variety of obstetric service options from which to choose. Also, time is usually available to consider the various types of obstetric services available in a particular market.

The delivery of a baby is also a unique medical service in the sense that multiple family members are actively involved. The pregnant female, the baby and perhaps the father or other family members may participate in the birthing experience.

An effective obstetric marketing strategy can provide multiple related benefits to the hospital providing this service. First, an effective marketing strategy will result in higher levels of patient satisfaction. This health care sector is an outstanding area in which to foster overall feelings of goodwill toward the provider due to the emotional facets of the birthing experience. This goodwill is apt to result in the provision of subsequent obstetric services (repeat purchases) and pediatric services. If the goodwill is of a sufficient magnitude, the hospital providing the obstetric service may become the source of health care services for the entire family. In addition, word-of-mouth communication may influence many other people to seek needed medical attention at that facility. These factors, as well as excess capacity, have greatly increased the application of marketing practices in this particular health care sector in recent years.

RESEARCH PROCEDURES

Research Environment

The research described in this article was conducted in a medium-size community in the Southwest. Two competing hospitals provided virtually all of the area's obstetric services. The services provided by these two hospitals were very similar and strategists at both hospitals could be described as responsive to the needs and wants of the health care market.

Sampling Methods

The researchers mailed 933 questionnaires to women who had given birth at one of the two local

hospitals within the last year. Approximately half of the names and addresses were systematically drawn from each of the hospital's records. The rate of response to the survey was approximately 27%, as 254 usable surveys were returned. Similar rates of response were obtained for each of the two hospitals.

Development of the Research Instrument

The list of salient attributes is a critical factor in the successful application of importance-performance analysis. To assist in the development of this list, several depth interviews were conducted with knowledgeable persons working in the field of obstetrics. In addition, preliminary personal interviews with former obstetric patients of the local hospitals were conducted. Perhaps of even more importance was the review of related research by Anderson (1982), Elwell and Cooper (1980), Glassman and Glassman (1981), Sapienza (1980) and others. While none of these articles involved importance-performance analysis, each was very useful in suggesting potentially salient attributes.

A balanced six-point, bi-polar rating scale was developed for the importance as well as for the performance measures. Since there were no neutral scale positions, each was a "forced-choice" scale. The importance scale was anchored by "least important" (1) and "most important" (6). Respondents rated the performance of the provider of obstetric services for each attribute on a six-point scale ranging from "most unfavorable" (1) to "most favorable" (6).

Relatively high levels of satisfaction are often reported in health care surveys due to: (1) generally outstanding performance of health care providers; (2) patient inability to identify poor performance, especially for technical medical procedures; and/or (3) patient reluctance to criticize the medical establishment (Noyes et al., 1974). Because of this, the relative or rank order of the attributes on the importance, and on the performance scales should also be considered in addition to the absolute magnitude of the values.

RESULTS OF THE RESEARCH

After extensive preliminary analysis, a list of 20 attributes relevant to the marketing of hospital obstetric services was ultimately finalized. Respondents to the survey rated the importance of these attributes and the perfor-

mance of health care marketers in providing these services. The attributes examined and the respective mean importance and performance ratings are shown in Table 1.

In general, relatively high levels of importance, as well as performance, were reported by the former obstetric patients. The high levels of importance were not unexpected because previous research, the depth interviews with practitioners and the preliminary personal interviews with consumers had suggested that each of the 20 attributes included in the study might be salient characteristics of obstetric health care services. The relatively high performance ratings had also been predicted due to the marketing orientation of both hospitals, and the previously mentioned tendency for relatively high measures of reported satisfaction in health care surveys.

Several interesting results relating to individual attributes were provided by the analysis. For example, "clean accommodations" was the attribute with the highest mean importance rating for patients in selecting a hos-

pital in which to receive obstetric services. "Efficient nurses" ranked second, while "comfortable accommodations" and "concerned nurses" were third and fourth, respectively. Thus, clean and comfortable accommodations, as well as efficient and concerned nurses, are critically important factors that obstetric patients evaluate. The mean values and consequent rank ordering of the importance of the remaining attributes are also shown in Table 1.

It is interesting to note that only two attributes had mean importance ratings that were under the midpoint (3.5) on the six-point scale. These features had recently been introduced by both hospitals in an attempt to better serve the patients' needs and wants, but evidently patients did not consider "dinners or celebrations for parents" or "one-day stay in the hospital" to be important considerations in the selection of hospital obstetric services.

The mean performance ratings of the 20 attributes are not listed in rank order in Table 1; but a brief review of

TABLE 1
Importance and Performance Ratings of the Attributes

Attribute Number	Attribute Description	Mean Importance Rating ^(a)	Mean Performance Rating ^(b)
1	Clean accommodations	5.79	5.60
2	Efficient nurses	5.68	5.36
3	Comfortable accommodations	5.62	5.41
4	Concerned nurses	5.57	5.19
5	General impression of the maternity department	5.40	5.25
6	Maternity services offered	5.29	5.33
7	Reputation/image of the hospital	5.22	5.35
8	Attractive and appetizing food	4.89	4.20
9	Bonding between mother and child allowed	4.88	4.97
10	Credit terms available	4.70	4.65
11	Prenatal classes	4.68	5.02
12	No limit on visitors after delivery	4.48	4.96
13	Baby in room with mother (rooming in)	4.47	4.84
14	Lamaze method permitted	4.45	5.00
15	Fixed charge for normal delivery	4.44	4.56
16	Classes in care of the baby	4.36	3.93
17	Home-like rooms	4.18	4.65
18	Convenient location	3.64	5.07
19	Dinners or celebrations for parents	2.99	2.84
20	One-day stay in hospital	2.71	3.37

(a) Ratings were collected on a six-point scale ranging from 1 = least important to 6 = most important;

(b) Ratings were collected on a six-point scale ranging from 1 = most unfavorable to 6 = most favorable.

these findings indicates that 10 of the 20 attributes had mean values of 5.00 or more on the six-point scale. "Clean accommodations," "comfortable accommodations," "efficient nurses," "reputation/image of the hospital" and "maternity services offered" ranked one through five, respectively.

"One-day stay in the hospital" and "dinners or celebrations for parents" were the two attributes with the lowest ranking mean performance ratings. As previously mentioned, these hospitals had only recently introduced these services. It takes time for any new system to become efficient. Perhaps the learning curve effect at least partially explains the relatively poor performance of the hospitals in providing these two services. Furthermore, the relatively low scores may be at least partially due to the fact that some of the patients were not very familiar with these new services.

The results of the survey become even more useful and actionable when plotted on the importance-performance grid. As shown in Figure 1, 18 of the 20 attributes were included in Quadrant B where the suggested strategy for marketers is "keep up the good work." Thus, maintenance of current practices would be the recommendation for these 18 aspects of marketing strategy in this environment.

Only one attribute, "dinners or celebrations for parents," fell into Quadrant C which suggests that this was a "low priority" feature. The remaining attribute, "one-day stay in hospital," was included in Quadrant D indicating that obstetric marketers were engaged in "possible overkill" in providing this service.

Figure 1 also shows the iso-rating diagonal line that was previously discussed in this article. Eight of the 20 attributes represented "market opportunities" because the importance rating exceeded the performance measure. Health care strategists interested in gaining a competitive advantage should attempt to improve performance in these areas. The greater the distance of the plotted attribute from the iso-rating line, the greater the discrepancy between the mean value of the attribute's importance and performance rating. Consequently, while the relative importance ranking of the attributes must also be considered, an attribute such as Number 8 (attractive and appetizing food) which is relatively important and considerably above the iso-rating line offers an attractive market opportunity to the hospital that can improve perceptions of its performance in providing this service.

Twelve of the 20 attributes were plotted below the iso-rating line reflecting "satiated needs" since the performance rating exceeded the level of importance. It would not be possible to significantly improve the hospital's competitive advantage by focusing on improving the provisions of these attributes. For example, Attribute 18 (convenient location), is far below the iso-rating line. There would be very minimal competitive gains to be expected from the establishment of branch locations, patient pick-up and delivery service, or other tactics designed to enhance the convenience of the hospital's location because patients had already expressed quite favorable attitudes concerning this hospital attribute.

SUMMARY

McNeal and Lamb (1980) recently reported that 79% of the not-for-profit hospitals they examined periodically conducted surveys to evaluate patient satisfaction. While satisfaction studies represent valuable sources of information, health care marketing strategists would find the results of importance-performance analysis to be even more useful because the strategic implications of the results are much more readily determined.

This article has described the role of importance-performance analysis in developing health care marketing strategies. Methodological considerations involved in using the procedure have been discussed and an application of importance-performance analysis for developing hospital obstetric marketing strategies has been presented.

Importance-performance analysis can be conducted for a sector of the health care industry within a well defined geographic market, as was demonstrated in this article, or the procedure can be conducted for a single provider of health care services. Furthermore, the importance of attributes can be taxonomically analyzed to identify particular "benefits-sought" types of market segments. Separate importance-performance analysis can then be conducted for each of the determined patient groups. In addition, it would be especially interesting to determine the extent of any demographic differences in the importance of the attributes. For example, do first-time mothers place *more* or *less* importance on certain attributes in comparison to women who have previously given birth? Also, does importance differ depending upon the type of health insurance that the patient carries? Thus, a wide range of methodological

opportunities is presented by importance-performance analysis, and future research should explore these issues.

Marketing practices within the health care sector have greatly improved since the "discovery" of marketing in the early 1970s by strategists working in this

industry. As competition intensifies and the environment continues to change, importance-performance analysis is a research methodology that can significantly contribute to the continued improvement of health care marketing practices. This improvement will lead to better medical care for patients and improved organizational effectiveness by the providers of health care services.

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