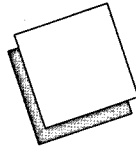


**An executive summary for managers and executive readers can be found at the end of this article**



## Patient satisfaction: a matter of choice

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**Keywords** Services marketing, Customer satisfaction, Service quality, Health care

**Abstract** An experiment was conducted to examine the relationship between patient satisfaction and patients' freedom to choose a physician and the outcome of a health service encounter. Each construct with corresponding measurements is discussed and their relationship with satisfaction is reviewed. Hypotheses were developed and tested for each relationship using pencil and paper scenarios of a patient's service encounter at a health clinic. The study yielded four major findings. First, patients who experienced a good health outcome were significantly more satisfied than patients who received a bad health outcome. Second, patient satisfaction ratings differed significantly only in the bad outcome condition, suggesting an outcome bias. Third, patients who were given the freedom to select a physician but did not receive their chosen physician were least satisfied. Fourth, there was no difference in satisfaction between patients who had a choice of physician and those who did not.

### Introduction

Imagine the following. A young professional couple gets the hoped-for news that they are now expecting the birth of their first child. The couple's Health Maintenance Organization (HMO) allows them to select a physician of their choice so, after careful consideration, they pick one that they both feel best meets their needs. During the duration of the pregnancy, the couple sees their care giver on a regular basis for check ups and get to know him quite well. Over time, a close doctor-patient relationship is established, one where the patient trusts the physician and the physician deeply understands the progressing condition and needs of the patient. The much anticipated day arrived with the mother-to-be going into labor. On arriving at the hospital, the couple were shocked to find that their regular physician was not there. Instead, a new, unfamiliar doctor would be making their delivery. The delivery did not go as smoothly as hoped. Some complications resulted in part from the new physician's lack of familiarity with his patient's special condition. The mother and child were ultimately healthy, but the couple's experience was extremely upsetting and left them greatly dissatisfied with how at the most critical moment, they were denied their chosen physician.

**A young couple**

**Actual service experience**

The above scenario, based on an actual service experience, is an illustration of how denying patients to see their chosen physician may negatively impact patient satisfaction. The feelings of the couple above were not unique. Relationships between patients and physicians are based on intimate knowledge and for many patients, emotional as well as psychological

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attention are extremely important. Ultimately, having to start over with a different physician can be quite traumatic for patients (Tarrant, 1997).

As highlighted in the opening vignette, this study focuses on the effects of patient choice on patient satisfaction. An experiment was conducted where subjects read a scenario about having the symptoms of an upper respiratory infection and visiting a health clinic for the first time. Subjects were placed in conditions where they could either choose a doctor and receive him ("choice accepted"), be assigned a preferred doctor ("no choice"), or choose their doctor but receive a different, non-preferred physician ("choice rejected"). Given that health care services may have varying and unpredictable outcomes, the subjects were placed in either "good" or "bad" health outcomes. The goodness/badness of the outcome was operationalized by the length of time it took for the patient's symptoms to disappear. The purpose of this study is to assess the combined effects of the patient choice and health outcomes on patient satisfaction.

### Health care services

#### Importance of issues

The issue of patients having a choice in selecting their doctor continues to be a timely and important subject in the marketing of health care services. For years, traditional indemnity plans allowed patients to choose their doctors almost at will. However, the flexibility available to patients regarding physician choice is becoming more restricted with the proliferation of managed care health insurance plans (Tarrant, 1997). Managed care plans were developed with the desire to hold costs down while being billed as offering consumer choice. Yet, there is a pervasive belief among consumers that managed care limits their choice (Temkin-Greener and Winchell, 1991; Zagorin, 1993). According to a recent national survey of 3,200 working adults, managed care was actually perceived to place limits on the freedom to choose a physician (Ross, 1997). A total of 51 percent of the respondents in a health care survey of 600 Massachusetts residents indicated their concern about losing the right to choose their doctor as a "very serious" concern, while 56 per cent believed the insurance industry will continue to limit patients' choice of doctors (Kiley and Company, 1997). In Washington state, the Coalition for Patient Choice delivered 240,000 signatures of registered voters to the Secretary of State's Office to place an initiative on the ballot that would allow people to choose their own doctor (Wippel, 1997).

### Freedom to choose

The freedom to choose a physician is not the only issue consumers face. A second major issue is consumers' concern with the quality of health outcomes resulting from managed care treatment (*Hospitals*, 1993). There is a perception among patients that negative health outcomes in managed health care are too frequent. According to one public opinion poll, 48 per cent of Americans have had personal problems with managed care or know someone who had a bad experience (Kaiser Family Foundation/Harvard University, 1998). Similarly, another poll found that 18 per cent of healthy individuals and 29 per cent of people in fair or poor health felt their quality of care was worse than three years ago (KPMG Peat Marwick LLP and Northwestern University, 1998). As stated by a senior researcher at the Kaiser Family Foundation: "What we're seeing and hearing is that more and more people are having some kind of negative interaction with the system" (Ornstein, 1998). Given the public's widespread concern with health care choice and quality of care, they were examined in this study.

## Literature review

### *Patient choice*

The health care literature contains a handful of studies that specifically address the impact of patient choice on patient satisfaction. In one study, patients' choice of health care providers in a community mental health center was manipulated and patient satisfaction was measured. Subjects either viewed a presentation of health care providers and chose their provider, viewed a presentation and were assigned to a provider, or were simply assigned to a provider. Overall, the subjects did not differ in their level of satisfaction (Manthei *et al.*, 1982).

In contrast, choice seemed to matter where only two out of 23 patients who were given the choice to select their care provider actually declined to make their choice (Manthei, 1983). In a follow up study, it was found that the act of allowing patients to choose their own health care provider improved ratings for services received (Manthei, 1988).

In a field experiment using low income women to investigate the implications of having some form of health care choice, subjects held more positive perceptions about their condition when they either had a choice, had more choices than expected, or had a restricted choice. Having no choice at all created the most dissatisfaction (Curbow, 1986).

According to telephone interviews among enrollees in a HMO, patients who saw their own physician were significantly more satisfied than patients who did not. Patients who were assigned their provider and received their own (preferred) physician were most satisfied, suggesting they were pleasantly surprised to see their own physician as a last minute appointment or walk-in. Patients who requested to see their own physician but received another doctor were least satisfied (Weyrauch, 1996). More recently, a survey of 10,205 HMO patients found that being able to choose a physician was the single predictor most strongly related to having high overall satisfaction (Schmittiel *et al.*, 1997). Patients who chose their personal physician ( $n = 4,748$ ) were 16 per cent to 20 percent more likely to rate their satisfaction "excellent" or "very good" than patients who were assigned a physician ( $n = 5,457$ ).

### *Patient choice theory*

While two of the studies in the literature review found little support for the influence of patient choice, the relationship between patients having the freedom to choose their physician and satisfaction appears fairly robust. The positive connection between choice and satisfaction may be explained by at least three theories. First, the study of the effects of individual choice can be traced to Cognitive Dissonance Theory (Festinger, 1957). Much of the work on Cognitive Dissonance Theory hinges on individual volition, where the value of a chosen alternative is increased relative to a non-chosen alternative as a means to minimize any conflict from lost opportunities. Cognitive Dissonance Theory would suggest in this study that if a patient is offered a choice of doctors and chose one who performed poorly, the patient would be more likely to minimize the regret of any unpleasant consequences than a patient who was never offered a choice and felt no personal responsibility to maintain a state of cognitive consistency.

Second, the positive impact of choice on satisfaction may be explained by Reactance Theory (Brehm, 1966). According to Reactance Theory, individuals respond in a negative manner when important freedoms are threatened. In cases where freedoms are reduced, consumers may react

## Field experiment

## Cognitive Dissonance Theory

## Attribution Theory

strongly to that which is forbidden (Brehm, 1966). Further, reactions tend to be strongest for people who expect to have a choice (Wortman and Brehm, 1975) or place a high value on having a choice (Clee and Wicklund, 1980). Reactance Theory would suggest in this study that a patient who expects to choose a doctor but is denied his choice would be least satisfied.

Third, Attribution Theory (Kelley, 1967) may explain even more. Attribution Theory is concerned with how people assign causality for events. The direction of attribution appears to affect consumer satisfaction. Attribution Theory is especially important when negative outcomes occur because individuals tend to become more motivated to seek causality (Folkes, 1982). For example, it has been suggested that when a negative event is externally attributed to a product (Richins, 1983) or service provider (Folkes *et al.*, 1987), consumers tend to be more dissatisfied than if the failure is attributed to either chance or the actions of the consumer. The linkage of Attribution Theory to choice was illustrated in a study where patients were assigned a therapy treatment. Because the patients had no choice, they did not feel personally responsible for the outcome (Harvey *et al.*, 1974). In the current study, if an individual is not given a choice of a doctor, he/she would be more likely to make an external attribution and become more dissatisfied with a negative outcome than one who was given a choice. Accordingly, the first hypothesis is offered below.

*H1*: Patient satisfaction will be highest in the "choice accepted" condition, next highest in the "no choice" condition, and lowest in the "choice rejected" condition.

In *H1*, the condition of patients being more satisfied with having a choice than not having a choice was supported by extant choice-satisfaction literature (Schmittiel *et al.* 1997) and the theories of Cognitive Dissonance and Attribution Theory. The condition that subjects were most dissatisfied after having their choice "rejected" was hypothesized according to Reactance Theory. This "choice rejected" condition was also exemplified in the opening vignette of this paper and may also fall under the rubric of Expectancy Disconfirmation model of satisfaction (Oliver, 1980) and "gap four" of Gap Theory (Parasuraman *et al.*, 1985), where there is a discrepancy between what is communicated to the customer and what is delivered.

## Health care

### *Patient health outcomes*

Like many services, health care may be difficult to assess after the fact. However, when patients can easily assess their health outcomes such as in the case of having obvious physiological symptoms easily perceived by the patient (e.g., coughing, a sore throat, and draining sinuses), health outcomes would become an important factor influencing patient satisfaction. Also, because in many cases patients may not know if they received the best possible service, they often rely on the tangibility of their perceived health. Therefore, patients are likely to base their evaluations on the improvement of their symptoms (Gabbott and Hogg, 1994).

The relevance of a service process variable such as "freedom to choose a doctor" hinges on the goodness or badness of the patient's health outcome. The outcome of a service encounter may affect the patient's satisfaction level as dictated by the expectancy disconfirmation model of satisfaction (Oliver, 1980). For example, it has been found that patients' satisfaction increases as the outcomes of services provided meet their expectations (Like and Zyzanski, 1987). Accordingly, the second hypothesis was based on the

**What influences satisfaction?**

notion that patient satisfaction is in part driven by the favorableness of the health outcome.

*H2:* Patient satisfaction will be higher in the “good” outcome condition than in the “bad” outcome condition.

While *H2* is normatively based, the assertion that a positive outcome always equals greater satisfaction appears overly simplistic given the evidence that a healthy patient can be dissatisfied or that an unhealthy patient can be satisfied (Ross *et al.*, 1987). Satisfaction is not exclusive to the outcome alone. Rather, satisfaction may also be influenced by process variables such as the quality of the interaction with the doctor (Glassman and Glassman, 1981) or perhaps having a choice of physician. For example, a field study was undertaken to understand the decision process women used to choose their obstetrician. Findings revealed that patient satisfaction was affected primarily by the process factor of doctors giving sufficient information about what to expect during pregnancy and providing continuity of care (Glassman and Glassman, 1981).

*Outcome bias phenomenon*

An empirical question emerges as to how health outcome and patient choice may influence patient satisfaction. Such an interaction may be explained by the “outcome bias” phenomenon. When patients shift the weight of their evaluation of satisfaction towards outcomes and away from such process factors as freedom of choice to select a doctor, then an outcome bias exists. An outcome bias occurs when individuals consider outcomes with little or no regard to the quality of the processes leading to the outcome (Baron and Hershey, 1988). The effects of outcome bias appear to have widespread application and have been studied in numerous settings including public policy (Mowen and Stone, 1992), personal selling (Marshall, 1993; Marshall and Mowen, 1992, 1993), military strategy (Lipschitz, 1989), and health care (Linder-Pelz, 1982; Mitchell and Kalb, 1981). The results of these studies have consistently yielded an outcome bias where the outcome of the decision (i.e. either good or bad) systematically affected subjects’ evaluations of the decision maker. That is, when a decision was appropriate, the decision maker was evaluated positively, regardless of the outcome. However, when the decision was perceived as inappropriate, the decision maker was evaluated negatively when bad outcomes occurred, but positively when good outcomes resulted.

Consistent with the outcome bias phenomenon, process-based variables may not be as important when successful outcomes occur but may become more important when unsuccessful outcomes occur. For example, one study found that the process variable of procedures used by doctors became important to women who were seeking pregnancy only when they were unable to achieve conception (Lytle and Mokwa, 1992). In contrast, women were not concerned about the procedures used by doctors when conception occurred. Given the outcome bias phenomenon, a third hypothesis was formulated.

*H3:* Patient satisfaction will vary only when a “bad” outcome occurs.

In review of the literature of patient choice and health outcomes, a major limitation was identified. None of the studies accounted for the seriousness of the illness nor the nature of the patients’ health outcomes after service delivery. In response, the current study controlled for these factors by employing a paper-and-pencil scenario-based experiment with subjects role playing in a managed care setting. This study also extended the patient

## Experimental design

choice-satisfaction research stream by including an experimental condition that examined the impact of unexpectedly replacing the patient's selected physician with an undesirable doctor ("choice rejected").

### The experiment

A  $3 \times 2$  full factorial between subjects experimental design was employed. Three levels of choice were manipulated:

- (1) Choice accepted: the subjects were allowed to select their preferred physician for treatment and received that particular physician.
- (2) No choice: a physician (the same one as in the patient "choice accepted" condition) was assigned to the subject without any opportunity to choose.
- (3) Choice rejected: the subjects were allowed to select their preferred physician but another, non-preferred physician was assigned to the subject without any explanation.

Two levels of health outcome were manipulated:

- (1) Good outcome: where recovery from the illness required only four days after the office visit with expectations for recovery from the illness set by the physician at seven days.
- (2) Bad outcome: where recovery took 14 days after the office visit with expectations for recovery from the illness set by the physician at seven days.

## First time visit

Subjects read that they were making a first time visit to a health clinic after suffering from the symptoms of a chronic cough with phlegm, draining sinuses, difficulty breathing, a sore throat, congestion, and nausea. On arrival at the clinic, the subjects read about receiving a list containing the names and information about five physicians at the clinic. Information on the list included the doctor's name, their type of degree, institution and year degree was earned, place of internship and year completed, and a medical specialty or interest. The list contained an older physician with an interest in geriatric care (Otis Kramer), a woman doctor interested in adolescent medicine (Mary Smith), a Chinese doctor interested in women's health (Fen-Hong Tsiao), a young DO with a foreign degree and an interest in general medicine (Harry Young), and a doctor from an impressive school with excellent experience and a specialty in ear/nose and throat care that matched up well for treating the upper respiratory infection symptoms described in the scenario (Richard Wright). The physician descriptions were created to provide the subjects with a realistic but varied assortment of physicians with differing demographic characteristics and specialty interests that would make some of them significantly more desirable than others. Based on pretests, Richard Wright was considered to be the most desirable physician, followed by Harry Young. Fen-Hong Tsiao was considered to be the least desirable among pretested subjects.

"Choice accepted" subjects and "choice rejected" subjects were instructed to select a doctor from the list. "No choice" subjects reviewed the list but were told that a doctor would be assigned to them. In any case, the doctor subjects received would be their physician for a period of one year. Having the doctor for a year was included in the scenario to create a sense of permanence to the decision and to increase the importance of which doctor would be received.

## Realistic health care

Both the "choice accepted" and the "no choice" subjects received the same doctor (Dr. Wright). These subjects were given the same doctor because it allowed for direct comparisons between patients having or not having a choice. However, "choice rejected" subjects received a doctor considered to be less desirable based on pretesting (Dr. Tsiao). Afterward, the subjects read about a series of events that were considered reasonable and appropriate by medical professional consultants for what would happen given the patient's condition. It is important to note that there were no differences in how the patients were treated by the care givers, regardless of which choice and outcome condition the subjects were in. After the doctor administered the treatment, "good outcome" subjects read that they became well within four days of the office visit, while "bad outcome" subjects read that it took 14 days after their visit to become well again.

### *Development of stimuli*

The scenario was created with the intent of providing a realistic health care encounter that was correct in every detail while providing material that subjects would easily relate to. Three medical doctors at a university health sciences center provided valuable professional guidance with the description of the patient's symptoms, descriptions of doctors in the scenario, the procedure of treating the patient, the doctor's final recommendation, as well as the expected and actual illness durations for the patient. Several rounds of adjustments and revisions were made to the scenario based on recommendations of these doctors. First, the symptoms of a lower respiratory infection were carefully researched and verified and the following description was created: "a cough with phlegm, draining sinuses, difficulty breathing, a sore throat, congestion, and nausea" that occurred for several days and made the patient miss a day of work.

Second, prior to the experiment being administered, the list of hypothetical physicians that the subjects would read about in the experiment was pretested in two rounds, using a total of 76 students, to identify subjects' preferences among the physician profiles. The pretest was also conducted to create a physician list so that only two of the physicians would be comparably attractive, thus facilitating an element of conflict and cognitive dissonance when choosing among the profiles. In the second round of pretesting, 70 percent of the students preferred Dr Wright (MD from Johns Hopkins University 1974, finished residency at the Mayo Clinic in 1978, with an interest in ear/nose and throat care) and 30 percent preferred Dr Young (DO from Guadalajara College of Osteopathic Medicine 1990, finished residency at Fort Worth Medical Center in 1993, with an interest in family and general medicine). Dr Tsiao (MD from The University of Oklahoma 1985, finished obstetrics/gynecology residency at Oklahoma City Hospital in 1988, with an interest in women's health) was determined to be least preferred from the pretest.

## The treatment procedure

Third, the treatment procedure had to be carefully crafted to reflect the common practices of a medical clinic. The subjects read about waiting 15 minutes before being examined by a nurse. The nurse recorded the patient's symptoms and vital signs. After another 15 minute wait, the doctor came in, introduced himself, and asked the patient to explain his/her symptoms. The doctor examined the patient's throat, described as "very red and swollen" and checked the ear drums, which were described as "swollen and inflamed". The doctor checked the patient's lungs with a stethoscope for indications of fluid build up and wheezing. The lungs were found to be "congested" and the doctor explained to the patient that there might be an

## Realistic health outcome

upper respiratory infection and if it remained untreated, it could lead to more serious problems. A blood sample was taken. The doctor explained that the blood sample was used to check the white blood cell count and to test for other infections. After another 20 minutes, the doctor came in with the results and said that there was an upper respiratory infection. He prescribed antibiotics and recommended the patient to get extra rest and fluids. The doctor said that if his instructions were followed, the patient should be well in seven days.

Finally, the post-visit conditions were developed to reflect a realistic health outcome based on the expert opinions of the consulting medical doctors of this study. The "good outcome" condition was operationalized as four days for symptoms to disappear while the "bad outcome" condition required patients to take 14 days to recover.

### *Subjects*

Subjects for the experiment were 152 undergraduate students in business classes at a state university in the southwest USA. Of the sample, 49 percent was male and 51 percent was female while 90 percent of the subjects were between the ages of 18 to 25 years and the majority of the subjects were US citizens (86 per cent).

### *Procedure*

The pencil-and-paper experiment was conducted in two parts. In the first part, subjects received a cover sheet with instructions explaining that they would read a scenario and give responses based on the scenario information. The second page contained the scenario where subjects imagined they were suffering from the symptoms of an upper respiratory infection and visited a health clinic for the first time. Within the first two pages of the stimuli, all subjects received identical information, except two-thirds of them were instructed to choose their doctor while the remaining one-third were informed a doctor would be assigned to them.

After the subjects had completely read the first part of the scenario, they received the second part. The second part of the materials indicated which physician the subjects received, the examination procedure by the doctor, and the outcome. The experiment was administered in two distinctly different parts so that subjects in the choice condition would feel a sense of choice after making their selection. The subjects who were given no choice received the scenario with Dr Wright as their attending physician while the remaining two-thirds of the students who were given a choice randomly received either the scenario with Dr Wright ("choice accepted") or Dr Tsiao ("choice rejected"). After the experiment was conducted, subjects were debriefed.

## Dependent variable

### *Dependent measure*

The dependent variable was a global measure of patient satisfaction. Traditionally, marketers have tended to view satisfaction globally and as an emotional response to a service (Singh, 1991). Others have combined both emotional and cognitive aspects into a "quasi-cognitive" satisfaction evaluation (Westbrook and Oliver, 1981). In the health care literature, the conceptualization of satisfaction as being global is well accepted (Hines, *et al.*, 1977; Linder-Pelz, 1982; Ware *et al.*, 1978).

In this study, satisfaction represented a situational specific measure of the subjects' overall satisfaction with their health care service provider. Using

### Hypothesized relationships

many key common factors found in a content analysis of over 900 studies measuring patient satisfaction (Ware *et al.*, 1978), the measure of patient satisfaction included: patients' assessment of their physician's demeanor, their likelihood to recommend the doctor to a friend, comfort with seeing the physician again in the future, overall satisfaction, overall impressions of the physician, perceived effort put forth by the physician, and perceived skill of the physician. Satisfaction was the summation of ten items measured on seven-point Likert Scales.

Cronbach alphas and item-to-total correlations were calculated for the dependent measure of global patient satisfaction. Item-to-total correlations were generally high; 70 per cent of the correlations were greater than  $r = 0.70$  and ranged from 0.549 to 0.922. The Cronbach alpha of the global patient satisfaction was 0.949.

### Results

#### Test of hypotheses

*A priori* orthogonal *F*-test comparisons of means were made to analyze the hypothesized relationships. Results are provided below in Figure 1.

*H1*: Patient satisfaction will be highest in the "choice accepted" condition, next highest in the "no choice" condition, and lowest in the "choice rejected" condition.

*Result: H1 partially supported.* (Note: *H1* was tested in the "bad outcome" condition per *H3*. Also, refer to Figure 1 and compare the three choice conditions along the continuum denoting the "bad outcome" condition). *H1* was not totally supported because there was no significant difference in satisfaction between the "choice accepted" and the "no choice" subjects. Where subjects received the same physician, the impact of having a choice versus not having one appeared to be negligible in this experiment.

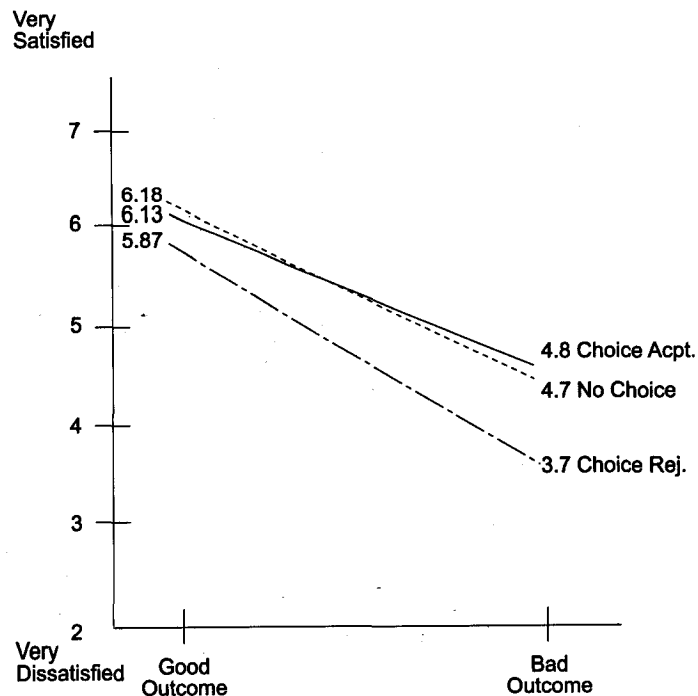


Figure 1. Results

**Differences in satisfaction**

Yet in support of *H1*, “choice rejected” subjects were significantly less satisfied than other subjects. This finding is consistent with the Expectancy Disconfirmation model of satisfaction, Gap Theory, and Reactance Theory, where a service provider who communicates one thing but delivers a less desirable alternative leads to dissatisfaction. Overall, the results implied that choice may influence patient satisfaction, but the choice-satisfaction relationship may be more complicated than previously presented. Refer to Table I and II for a summary of ANOVA results for *H1*.

*H2*: Patient satisfaction will be higher in the “good” outcome condition than in the “bad” outcome condition.

*Result: H2 was fully supported.* A robust outcome bias phenomenon occurred here. “Good” outcome subjects were significantly more satisfied than “bad” outcome subjects. This result lends empirical support to the belief that the goodness or badness of health outcomes have a major impact on consumer satisfaction. Refer to Figure 1 and note that the satisfaction values of “good” outcome subjects (6.1, 6.1, and 5.8;  $m = 6.0$ ) are significantly greater than those of ‘bad’ outcome subjects (4.8, 4.7, and 3.7;  $m = 4.4$ ). Refer to Table III for a summary of ANOVA results for *H2*.

*H3*: Patient satisfaction will vary only when a “bad” outcome occurs.

*Result: H3 fully supported.* As hypothesized according to the “outcome bias” phenomenon, significant differences in satisfaction occurred only in the “bad outcome” condition (refer to Table I and II and Figure 1). Within the “good outcome” condition, patient satisfaction did not differ significantly. In Figure 1, note that the mean satisfaction ratings of 6.18, 6.13, and 5.87 within the “good outcome” condition are closely clustered together and not significant at the 0.05 level. Thus, patients seemed more likely to reflect on the choice process prior to a negative outcome, with the goal of making some attribution. In particular, patients took a very negative view towards having their choice “rejected”. However, patients were less likely to reflect on the choice offerings if their symptoms disappeared quickly. This finding closely simulated the outcome bias phenomenon.

Condition	Mean	F-value	d.f.	p-value
Choice rejected	3.7	3.39	1,40	0.0023
Choice accepted	4.8	-	-	-

*Table I. ANOVA test of H1*

Condition	Mean	F-value	d.f.	p-value
Choice rejected	3.7	3.17	1,54	0.0048
No choice	4.7	-	-	-

*Table II. ANOVA test of H1*

Condition	Mean	F-value	d.f.	p-value
Good outcome	6.0	89.5	1,145	0.0001
Bad outcome	4.4	-	-	-

*Table III. ANOVA test of H2*

### *Manipulation checks*

*Outcome.* As a manipulation check of perceived outcome, subjects were asked to indicate:

- (1) the number of days the illness persisted;
- (2) the number of days the illness was expected to persist; and
- (3) the final outcome (i.e. an early or late recovery).

The outcome manipulation was considered salient where the percentage of correct responses averaged 91 per cent, 92 per cent, and 96 per cent respectively, for each of the three manipulation check questions.

*Choice.* Subjects were asked two manipulation check questions related directly to their understanding of choice. They were asked to determine whether the physician was selected or assigned and whether they had a choice in the selection of their physician. Manipulations here were considered salient among the conditions, with an average correct response rate for question one of 86 per cent and a 77 per cent average correct response rate for the second. Responses in the second question concerning choice were lower because subjects in the "choice rejected" condition did not receive the doctor they had selected. Therefore, some of the subjects likely became confused about whether there was ultimately any choice under such circumstances.

### **Manipulation check**

A final manipulation check was made to determine if the subjects could remember their attending physician as this information related to choice. Almost all subjects remembered their attending physician with a correct response rate of 98 per cent.

### **Managerial implications**

Several implications for health care managers may be drawn from this research. With regards to findings from *H1*, the freedom to choose a physician may not be as important to patients as originally thought. Patients did not discriminate between having or not having a choice of physician. However, a striking similarity between "choice accepted" and "no choice" subjects was that they all received their preferred physician. Therefore, the impact of choice may be mitigated by whether or not the patient receives a desirable physician. Similar to the outcome bias phenomenon, patients may view the receiving of a preferable doctor as a type of "good" outcome within the service encounter, thus reducing the likelihood a patient scrutinizes whether or not a choice was offered. Such an effect would be consistent with a previous study where patients who were assigned a preferred physician had very high satisfaction scores because they were pleasantly surprised.

### **"Choice rejected" subjects least satisfied**

The potential importance of which physician the patients received was also noted by the result that "choice rejected" subjects were least satisfied. Here, patients not only had their freedom of choice violated but they also received a non-preferred physician. A negative disconfirmation of patient expectations occurred. Managers should be aware that if expectations diverge between customers and service provider or if the expectations which have been set cannot be attained, then the service provider must adjust patients' expectations by intervening and informing the customer about what is happening and why. In this scenario, no explanation was given as to why the patient's choice was "rejected". Had an explanation been offered and an attempt been made to adjust expectations during the service encounter, patient satisfaction scores would have likely been improved. Following

**Some patients have ailments that cannot be eradicated in a timely manner**

through on any promised services is critical to maintaining patient satisfaction, especially when negative outcomes occur.

Regarding the findings from *H2*, health care service providers should realize that health-related outcomes continue to have a powerful role as an influence on patients' satisfaction. Regardless of the choice offering, the satisfaction level among "good" outcome subjects was higher than "bad" outcome subjects. While this finding should not suggest to health care managers that they need not worry about process factors as long as the health outcome is positive, it does indicate that patients place a premium on the state of their health. For any care providers who may be seen by customers as commodities, offering more process-based services such as expanded choices or promoting the expertise of the available physicians is a powerful tool to differentiate a health clinic and craft a competitive advantage.

Finally, the managerial implication that may be drawn from *H3* concerns the outcome bias phenomenon. The process leading to an outcome becomes less important if the outcome is positive, yet the process becomes more important if the outcome is negative. It is a fact of life that some patients will have health ailments that either cannot be eradicated or resolved in a manner considered timely by the patients. When bad outcomes occur, it is especially important that the patients feel as though every opportunity was afforded them to receive the best possible offerings during the treatment. Otherwise, they may make external attributions to either the doctors, nurses, or hospital in general about how things could have been handled differently.

#### **Limitations and future research**

The lack of difference in satisfaction ratings among the "choice accepted" and "no choice" subjects given a bad outcome was unexpected. Perhaps an alternative explanation for this particular finding is in the design of the study. Specifically, both "choice accepted" and "no choice" subjects received their preferred physician. It is possible that receiving a preferred physician influenced patient satisfaction more than the amount of choice offered. It is also logical that the level of patients' involvement with the doctors in the choice offering would affect the value of having/not having a choice. Thus, future research should include individual difference measures accounting for either patients' desire for choice or involvement with their doctor.

In addition, the illusion of subjects having a choice may be more difficult to achieve in a pencil-and-paper experiment. While the manipulation checks suggested that most subjects understood whether or not they had been given a choice, the subjects may not have been sufficiently involved. The illusion of choice may be better created by incorporating video, pictures, or even role playing into the experiment.

Finally, student subjects were used in the experiment. As the findings from students may not be readily generalizable to the US population, future researchers should consider using a broader range of subjects in a different setting, such as actual patients in a health clinic.

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***This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present***

## **Executive summary and implications for managers and executives**

### ***Patient choice is perceived to be diminishing***

*For years, health-care indemnity plans allowed patients to choose their doctors almost at will. But this flexibility is perceived to be becoming more restricted with the proliferation of managed care health insurance plans, which seek to hold down costs. More than half the respondents in a health care survey of 600 Massachusetts residents indicated their concern about losing the right to choose their doctor as "very serious". Relationships between patients and physicians are based on intimate knowledge. For many patients, emotional as well as psychological attention are extremely important. Having to start anew with a different physician can be quite traumatic for patients. There is also a perception among patients that managed health care is cutting the quality of care. Some 48 per cent of Americans in one public opinion poll had experienced personal problems with managed care or knew someone who had suffered a bad experience.*

### ***The impact of choice, and results, on satisfaction***

*Amyx et al. carried out an experiment among 152 undergraduates at a state university in south-west USA to examine the relationship between the patient's freedom to choose a physician, the outcome of treatment and the patient's satisfaction. Subjects read a scenario about having certain symptoms and visiting a health clinic. Using pencil-and-paper descriptions, they were placed in conditions where they could either choose a doctor and receive that physician ("choice accepted"), be assigned a preferred doctor ("no choice"), or choose a doctor but receive a different, non-preferred physician ("choice rejected"). The patients then learned that the result of their "treatment" was either good or bad, depending on the length of time it took their symptoms to disappear.*

*The experiment revealed no significant difference in satisfaction between the "choice accepted" and "no choice" subjects. In fact, both groups received the same physician who was supremely qualified to deal with their ailment. The "choice rejected" subjects were, however, significantly less satisfied.*

*Subjects whose treatment outcome was good were significantly more satisfied than those who suffered a bad result from their treatment. Significant differences in satisfaction occurred only among patients who had a bad outcome. Patients seemed more likely to reflect on the choice process before a negative outcome, with the goal of making some attribution. In particular, patients took a very negative view towards having their choice of physician rejected. Patients were less likely to reflect on the matter of choice of doctor if their symptoms disappeared quickly.*

### ***The lessons for health care managers***

*The results indicate that the freedom to choose a physician may not be as important to patients as originally thought. Patients did not discriminate between having or not having a choice of physician. However, "choice accepted" and "no choice" subjects all received the same, very well qualified physician.*

*The potential importance of which physician the patients received is reinforced by the fact that the "choice rejected" patients were least satisfied. Here, patients not only had their freedom of choice violated, but also received a non-preferred physician. They were not told why. Managers*

*should be aware that if expectations diverge between customers and service provider, or if the expectations which have been set cannot be attained, the service provider must adjust patients' expectations by informing the customer what is happening and why.*

***Key importance of the outcome of treatment***

*The outcome of treatment powerfully influences patients' satisfaction. Regardless of the choice offering, the satisfaction level among good outcome subjects was higher than bad outcome subjects. This does not mean that health care managers need not worry about how treatment is delivered as long as the health outcome is positive. It does, however, indicate that patients put a premium on the state of their health. Clinics can craft a competitive advantage by offering expanded choices or promoting the expertise of the available physicians.*

*It is a fact of life that some patients will have ailments that cannot be eradicated or resolved in a way which the patient considers timely. When bad outcomes occur, it is especially important that patients feel as though they were given every opportunity for the best possible treatment. Otherwise, they may blame the doctors, nurses or hospital in general.*

(A précis of the article "Patient satisfaction: a matter of choice". Supplied by Marketing Consultants for MCB University Press.)