

How Texas general hospitals influence patients
to use their services

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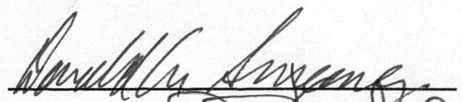
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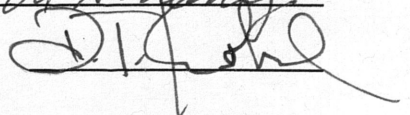


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INTRODUCTION

Marketing can be defined as a "conscious effort to get close to your customers . . . find out what they need or want and then develop new products or redesign existing services to meet their needs at a price that your customer will perceive as having value" (Haeuser and Gandy 1986:5). Although marketing plays a vital role in almost all businesses, it is just now becoming a standard practice for hospitals.

Past view of hospitals

In the past, it was considered inappropriate, even unethical, to perceive hospitals as market-orientated businesses. First, it was considered improper for both health professionals and their institutions to advertise. Customers came to professionals because of their reputations and not because of some manipulative advertising scheme. Also, since health care is an unwanted product which people usually do not plan to receive, advertising was thought to be ineffective. Advertising was also thought to be ineffective because most patients usually relied solely on their physicians' advice as to what hospital they would enter. With physicians as a hospital's primary "salesperson", hospitals were seen to have little control over what physicians recommended because they could not be considered employees. Finally, hospitals were not considered market-orientated because more than 70 percent of their patients did not pay for their health care with their own money (DeSalvo 1986:65).

Current view of hospitals

Today, hospitals are acutely aware of the importance of marketing to attract customers. This change results from the following:

1. Decrease in demand for inpatient services due to decentralization of technology, healthier lifestyles, and initiation of new laws and procedures, such as Prospective Payment Systems and Utilization Reviews,
2. A proliferation of alternative health care organizational forms, such as ambulatory care clinics and health maintenance organizations resulting in an increase in competition between these new health organizations and hospitals,
3. Better educated and better informed consumers looking on their own for hospital care instead of blindly following physician recommendations, and
4. The activities of businesses to manage spiralling health care costs.

The above changes show why marketing is now necessary within hospital systems to attract enough customers to survive.

Hospital customers

A hospital's customers include patients, physicians, their own employees, the general public, public officials, third party payers, businesses, as well as alternative delivery systems. A survey by the American Hospital Association revealed that 51.9 percent of Americans consider themselves, in conjunction with their families, as the primary decisionmakers when choosing a hospital. A total of 41.5 percent said the physician was the primary decisionmaker, and 6.6 percent considered themselves, along with their physician, as the main decisionmaker (American Hospital Association 1990:25). These findings illustrate the opportunities that hospitals have to influence patients directly and indirectly through influential others, such as physicians or family members. A third way in which patients may be influenced to use a specific hospital is if they are participants in a health plan, either through their employer or on their own, which only pays for services performed in a specific hospital. These are the main avenues for hospitals to use in order to influence patients' choices.

Marketing to hospital customers

Hospitals can market to their customers in many ways. Advertising, publicity, and sales promotions are all categories of marketing. Advertising includes television commercials, magazine ads, and directories, like the Yellow Pages. Publicity can include news stories, public seminars on health issues, and health fairs, while sales promotions include coupons and discounts.

One important aspect of marketing is positive awareness, both of the hospital and the services it offers. One study found that people familiar with a company are five times more likely to have a good opinion of that company (Hauser and Gandy 1986:40). If potential patients have a good opinion of a hospital, they should be more likely to use its services than the services of a competing hospital of which they know less about.

Hospitals are also aware that influencing a patient to use its services is only the first part of establishing a solid relationship. The events which happen during and after a patient's stay also influence his/her opinion. Hospitals increasingly attempt to treat every patient, as well as family and friends, as customers who are trying out the hospital for the very first time. Hospitals also follow up on discharged patients by mail or telephone. Patient satisfaction surveys are regularly used to gain feedback on how patients view hospital facilities, services, personnel, and procedures.

Marketing in different hospital forms

Two major categories of hospitals are public and private. Public hospitals are not-for-profit institutions owned by different levels of government. Private hospitals are either for-profit or not-for-profit companies owned by an individual or organization. Since marketing is a relatively new formal concept for hospitals, some types of hospitals have found it harder to adjust than others. A prime example of this would be not-for-profit institutions. Clarke and Shyavitz (1987:33) state it best when they say, "Not-for-profit organizations are ambivalent about whether the public responsibility that comes with the privileges that not-for-profit status confers allows them to actively manage market exchanges." Not-for-profit hospitals face the dilemma of whether it is "right" to market their services when they are given special privilege, such as tax-free status, by the community. However, "not-for-profit organizations exist to fulfill special social needs They have an obligation to fulfill those needs as effectively and efficiently as possible" (Clarke and Shyavitz 1987:34). By understanding the needs of society through marketing, not-for-profit, as well as for-profit, hospitals may be more able to fulfill their goals effectively.

PROBLEM

In this study, the marketing techniques of general hospitals in Texas are compared to see if any similarities or differences exist between private for-profit, private not-for-profit, and public (not-for-profit) hospitals. Also, the hospitals are compared on the basis of their size and status as either rural or urban.

Hypothesis

Before beginning the study, several observations were hypothesized.

1. The differences between the basic marketing practices of for-profit and not-for-profit hospitals, whether large or small, rural or urban, will be insignificant compared to the differences between private and public hospitals, and
2. urban hospitals use marketing techniques much more than rural hospitals.

Method

Sample

It was decided to use a mail questionnaire because of its ability to reach a large number of hospitals in a relatively inexpensive manner. The data for the different types of hospitals was gathered from the 1990 American Hospital Association Guide to the Health Care Field,. Using the list of codes in the front of the Guide (under Explanation of Hospital Listings - Classification Codes: county, city, city-county, and hospital district or authority for public hospitals; individual, partnership, and corporation for private for-profit hospitals; church owned and other for private not-for-profit hospitals), hospital names, addresses, names of administrators, and number of beds were gathered for each hospital in Texas and compiled by counties. Only general hospitals were considered in order to narrow the number of hospitals and to keep the study simplified. In the Guide issue, the American Hospital Association (AHA) states that the purpose of general hospitals is to "provide patient services, diagnostic and therapeutic, for a variety of medical conditions". After compiling the hospitals, the county and its hospitals were identified as either rural or urban. The hospitals were distributed in the following way:

TABLE 1: Type and Number of General Hospitals in Texas

Type of hospital	# of beds	# of hospitals
Public, rural & urban	1000+	0
	501-1000	2
	301-500	5
	101-300	12
	51-100	27
	31-50	32
	30 or less	55
Private for-profit, rural & urban	1000+	0
	501-1000	2
	301-500	6
	101-300	67
	51-100	35
	31-50	14
	30 or less	9
Private not-for-profit, rural & urban	1000+	2
	501-1000	10
	301-500	18
	101-300	47
	51-100	16
	31-50	26
	30 or less	10
TOTAL		393

Source: American Hospital Association Guide to the Health Care Field

The above table also shows the total number of hospitals which could be surveyed. Due to budget restraints for the project, only small (0-30 beds), medium (100-300 beds), and large (500+ beds) hospitals were surveyed for a total of 212 hospitals.

For some hospitals, the American Hospital Association gave information for a hospital system comprised of several hospitals. The names, addresses, and administrators' names were given for

each individual hospital and the hospital system; however, the bed size was only given for the total hospital system. In such cases, a survey was sent to each of the individual hospitals, increasing the actual number of surveys sent to 229. The returned survey instruments would allow the exact bed size for each hospital to be determined. The information in Table 1 (above) and Table 2 (below) only includes the hospital system and not individual hospitals because the bed size of the smaller units was unknown.

The following table illustrates the categories of hospitals which were surveyed.

TABLE 2: Hospitals Sent a Survey

Type of hospital	# of beds	# of hospitals
Public, rural	500-1000	-
	100-300	3
	30 or less	50
Public, urban	500-1000	2
	100-300	9
	30 or less	5
Private for-profit, rural	500-1000	-
	100-300	9
	30 or less	5
Private for-profit, urban	500-1000	2
	100-300	58
	30 or less	3
Private not-for-profit, rural	500-1000	-
	100-300	8
	30 or less	10
Private not-for-profit, urban	500-1000	9
	100-300	39
	30 or less	-
Total		212

Survey

With the sample list compiled, the next step was to construct the actual survey instrument, a copy of which may be found in Appendix A.

Hospital Information Section

The first part of the survey asked for the hospital's name and the name and title of the person completing the survey. Also, the respondent was asked if he/she would like a copy of the study's executive summary which hopefully would increase the response rate. The last two parts asked for the hospital's bed size and if the hospital is rural or urban. This was done to check the accuracy of the data collected from the AHA.

Advertising Media Section

The information section was followed by ten questions for a total survey length of three pages. Questions one through five were designed to gather information regarding methods used to influence patients to use a particular hospital. In part a) of each of the first five questions, the administrator was asked to rank various methods, media, or tactics with regards to their ability to influence patients to use a particular hospital, either directly or indirectly through an influential other as

- (1) very important
- (2) important
- (3) no opinion
- (4) unimportant
- (5) very unimportant

Part b) of questions one through five, then asked the respondent to circle the forms that his/her hospital uses or to add any additional items. The only exception to this was question four which only asked for additional items. Questions one through five dealt with the following issues.

Question one: advertising including newspaper, radio, billboard and transit ads, magazines, television, directories, and direct mail.

Question two: publicity including news stories, contests (ex: coloring contest for children), hosting athletic events, health fairs, and public seminars on health related topics.

Question three: sales promotions including discounts of services, free testing or screening, and coupons for services.

Question four: marketing media (advertising, publicity, sales and promotions), along with word of mouth and recommendation of physicians.

Question five: different factors which influence physicians to send patients to a specific hospital (hospital-physician computer linkages, quality of services, quality of facilities, discounted office space for private practice, relocation reimbursement, minimum annual income guarantee, office and administrative support support services, and medical equipment assistance).

Other

While questions one through five were designed to gather information regarding ways to influence patients to use a specific hospital, the last five questions dealt with ways to keep patients. Question six asked the administrator to check any of the listed activities (activities to pass the time if there is a wait, videos on the patient's illness or other health topics, complimentary coffee or snack, hospital staff to visit or offer support) or add new items which they provide for their patient's visitors. Question seven asked the hospitals if they have an evaluation form for patients to fill out. Question eight asked hospitals if they follow-up on discharged patients while question nine queried about possible use of follow-up by mail, telephone, or by other means. Question ten asked how long after the discharge is follow-up done.

Mail out

With the survey completed, the next step was to send the survey to the hospitals. A cover letter (see Appendix B) was composed describing the background and purpose of the study. Respondents were also told they could receive a copy of an executive summary if they marked yes on the actual survey form.

The form letter, personalized for each addressee was printed on Texas A&M University's Department of Urban and Regional Planning letterhead. Self-addressed and stamped return envelopes were included to facilitate the return of the surveys. A number was written on the back of each survey which matched the hospital

surveyed on a master list in case the hospital did not fill out the identification section. The first round of surveys (229) went out on November 28, 1990, and the second round went out on January 31, 1991 (158).

Only surveys returned by March 1 were included in the calculations. The following table shows the breakdown of which hospitals responded to the survey.

TABLE 3: Respondents to the Survey

Type of hospital	# of beds	# of hospitals	% response
Public, rural	500-1000	-	-
	100-300	4	100
	30 or less	20	40
Public, urban	500-1000	2	100
	100-300	1	11
	30 or less	0	0
Private for-profit, rural	500-1000	-	-
	100-300	5	56
	30 or less	2	40
Private for-profit, urban	500-1000	2	100
	100-300	25	43
	30 or less	1	33
Private not-for-profit, rural	500-1000	-	-
	100-300	7	78
	30 or less	6	60
Private not-for-profit, urban	500-1000	6	67
	100-300	14	36
	30 or less	-	-
Total		95	

A total of 95 responses were received out of 229 surveys sent for a response rate of 41 percent.

RESULTS

From the identification section, the person who filled out the survey was usually the administrator or the Director of Marketing or Community Relations. The results are as follows.

Hospital Viewpoints on Marketing Techniques

In part a) of questions one through five, the administrators were asked to rank the different marketing forms using the scale of one through five. The following tables represent the arithmetic means of the responses regarding the views of public, private for-profit, private not-for-profit (private no prof), private (combines private for-profit and private not-for-profit), rural, and urban hospitals on the various marketing techniques.

TABLE 4: Mean Response to Question One: Advertising Forms

Type of Hosp.	News- paper	Radio	Bill- board	Maga- zine	TV	Direc- tory	Direct Mail
Public	2.35	3.12	3.88	4.32	3.44	2.60	2.92
Private Profit	2.23	2.77	3.14	3.63	2.66	2.63	2.05
Private No Prof	2.18	2.97	3.13	3.84	2.85	2.27	2.12
Private	2.21	2.87	3.13	3.73	2.75	2.46	2.09
Rural	2.18	2.89	3.71	4.17	3.33	2.54	2.51
Urban	2.3	2.98	3.02	3.64	2.60	2.46	2.14

TABLE 5: Mean Response to Question Two: Publicity Forms

Type of Hosp.	News story	Contest	Event	Health Fair	Seminar
Public	1.82	3.76	3.96	2.48	2.56
Private Profit	1.83	3.79	3.59	2.29	2.09
Private No Prof	1.82	3.56	3.27	2.24	2.03
Private	1.82	3.68	3.43	2.27	2.06
Rural	1.75	3.81	3.86	2.07	2.23
Urban	1.82	3.64	3.08	2.39	2.04

TABLE 6: Mean Response to Question Three: Sales Promotion Forms

Type of Hosp.	Discounts	Free testing	Coupons
Public	3.00	2.64	3.96
Private Profit	2.56	2.34	3.09
Private No Prof	2.61	2.09	3.22
Private	2.43	2.16	3.16
Rural	2.81	2.37	3.51
Urban	2.38	2.22	3.24

TABLE 7: Mean Response to Question Four: Marketing Media

Type of Hosp.	Advertise	Publicity	Sales	Word of Mouth	Doctor
Public	2.84	2.60	3.60	1.40	1.20
Private Profit	2.60	2.36	3.09	1.26	1.00
Private No Prof	2.30	2.06	3.00	1.39	1.12
Private	2.46	2.22	3.05	1.32	1.06
Rural	2.74	2.37	3.41	1.44	1.19
Urban	2.40	2.28	3.02	1.26	1.02

TABLE 8: Mean Response to Question Five: Physician Influences

Type of Hosp.	Comp	Serv	Facil	Offc	Reloc	Incom	Supp	Equip
Public	3.68	1.42	1.69	2.96	2.83	2.24	2.40	2.48
Private Profit	2.71	1.20	1.37	2.54	2.55	2.27	2.62	2.62
Private No Prof	2.77	1.28	1.34	2.79	2.77	2.72	2.60	2.47
Private	2.74	1.24	1.36	2.65	2.65	2.48	2.61	2.55
Rural	3.29	1.42	1.63	2.85	2.59	2.19	2.43	2.52
Urban	2.74	1.18	1.30	2.64	2.80	2.61	2.66	2.53

Use of marketing forms

The respondents were then asked in part b) of questions one through five to circle the marketing forms they actually use. The following tables show the percentage use of each category. Also, below each table is a list of marketing activities which were not included in the question but were listed in part b) by the hospitals as other forms. These other forms are also divided into public, private profit, etc.

TABLE 9: Use of Advertising Forms (question one - percent)

Type of Hosp.	News- paper	Radio	Bill- board	Maga- zine	TV	Direc- tory	Direct Mail
Public	77.3	36.4	19.0	9.50	14.3	81.0	42.9
Private Profit	90.6	65.6	50.0	40.6	46.9	81.3	71.9
Private No Prof	100.0	66.7	51.7	24.1	36.7	80.0	66.7
Private	95.2	66.1	50.8	32.8	41.9	80.6	69.4
Rural	84.6	46.2	16.2	8.1	13.5	65.8	52.6
Urban	93.3	68.9	66.7	44.4	51.1	82.2	98.0

Other Advertising Forms Used by Hospitals

Public: Time and temperature, Brochure

Private Profit: Public relations/information activities, Physician marketing, Physician referral, Community Events

Private No Prof: School calendar

Rural: Brochure, Time and temperature, Public relations/information activities, School calendar

Urban: Physician marketing, Physician referral

TABLE 10: Use of Publicity Forms (question two - percent)

Type of Hosp.	News story	Contest	Event	Health Fair	Seminar
Public	81.8	20.0	10.0	100.0	60.0
Private Profit	93.8	40.0	38.7	93.8	84.4
Private No Prof	89.7	39.3	55.2	96.6	100.0
Private	91.8	39.7	46.7	95.1	91.8
Rural	84.6	26.3	13.2	50.0	55.3
Urban	93.3	39.6	49.0	87.8	83.7

Other Sales Promotion Forms Used by Hospitals

Public: High profile administrator, Community events
 Private Profit: Physician referral
 Private No Prof: Fundraising social
 Rural: High profile administrator, Community events
 Urban: Physician referral, Fundraising social

TABLE 11: Use of Sales Promotion Forms (question three - percent)

Type of Hosp.	Discounts	Free testing	Coupons
Public	47.6	61.9	10.0
Private Profit	71.0	73.3	35.7
Private No Prof	58.6	79.3	28.6
Private	65.0	76.3	32.1
Rural	46.2	56.4	10.8
Urban	72.7	83.7	42.5

Other Publicity Forms Used by Hospital

Public: None
 Private Profit: None
 Private No Prof: Membership in hospital "clubs"
 Rural: None
 Urban: Membership in hospital "clubs"

Question 4: Other Marketing Media Used by Hospitals

Public:	None
Private Profit:	Special projects, Hospital clubs, Physician referral, Technology, Community Events, Managed care
Private No Prof:	Managed care, Contract with local businesses, Community events, Physician locator, Opinions, Reputation
Rural:	Special projects, Reputation, Physician locator, Contracts with local businesses
Urban:	Hospital clubs, Physician referral, Community Events, Quality care, Technology, Managed care

The results of question four do not include a percentage use because the question only asks for other media which the administrators feel are important to influence patients to come to their hospitals.

TABLE 12: Use of Physician Influences (question five - percent)

Type of Hosp.	Comp	Serv	Facil	Offc	Reloc	Incom	Supp	Equip
Public	21.4	66.7	72.2	56.3	62.5	64.7	64.7	64.7
Private Profit	28.6	89.3	78.6	67.9	76.9	59.3	44.4	51.9
Private No Prof	45.0	85.7	85.7	58.8	68.4	83.3	73.7	70.6
Private	35.4	87.8	81.6	64.4	73.3	68.9	56.5	59.1
Rural	19.2	71.0	67.7	57.1	69.0	73.3	60.0	63.3
Urban	42.9	97.1	62.9	68.9	71.9	67.7	56.3	53.1

Other Physician Influences Used by Hospitals

Public: Newsletter, Physician/administrator retreat, Liability insurance

Private Profit: Physician liaison, Physician referral, Physician education, Insurance, Newsletter, Social, Financial information, Speaker's bureau

Private No Prof: Private practice support

Rural: Liability insurance, Newsletter, Physician/administrator retreat, Private practice support

Urban: Physician liaison, Physician referral, Physician education, Insurance, Newsletter, Social, Speaker's bureau, Financial information

Use of Marketing Techniques During and After Patients' Stays

Question six shows the different activities hospitals provide for their patients' visitors. Table 13 shows the percentage of hospitals answering question six which use each form. Also, below the table, a list includes the additional activities which were mentioned as other. Question 7 (Table 14) gives the percentage of each type of hospital using an evaluation form for the patient to fill out. Table 15 includes the last three questions. The percentage of hospitals which follow-up on their patients is listed under Follow-up with the method used listed under Mail or Telephone. Many hospitals use both mail and telephone to follow-up which gives a total percentage greater than 100 for these two categories. The amount of time following the patient's discharge before follow-up is done is divided into 0-1 week, 1-2 weeks, greater than 2 weeks with the percentage breakdown for each hospital type listed below.

TABLE 13: Activities for Patient's Visitors
(question six - percent)

Type of Hosp.	Activities	Videos	Snacks	Staff Support
Public	22.2	25.9	63.0	74.1
Private Profit	32.4	48.5	85.3	82.4
Private No Prof	37.1	51.4	91.4	80.0
Private	27.3	45.5	78.8	84.8
Rural	22.7	31.8	77.3	75.0
Urban	35.3	51.0	80.4	84.3

Other Activities for Visitors Used by Hospital

Public: Reclining chairs, Chaplain Private
 Profit: Hotel, Auxiliary, Service representative
 Private No Profit: Support groups, Auxiliary, Discount on hotel and meals
 Rural: Chaplain, Auxiliary
 Urban: Chaplain, Auxiliary, Service representative, Support groups, Discount on hotel and meals

TABLE 14: Hospitals Having an Evaluation Form
 (question seven - percent)

Type of Hosp.	Evaluation Form
Public	70.4
Private Profit	80.9
Private No Prof	82.9
Private	78.8
Rural	72.7
Urban	82.4

TABLE 15: Hospitals Which Follow-Up, Method Used, and Length of Time after Discharge before Follow-Up is Done (question 8, 9, and 10 - percent)

Type of Hosp.	Follow Up	Mail	Phone	0-1 wk	1-2 wk	> 2 wk
Public	55.6	40.0	93.3	80.0	20.0	-
Private Profit	88.2	70.0	90.0	59.3	18.5	22.2
Private No Prof	85.7	76.7	80.0	67.9	21.4	10.7
Private	90.9	73.3	85.0	63.6	20.0	7.3
Rural	59.1	61.5	80.8	76.2	19.0	4.8
Urban	96.1	67.3	85.7	63.8	17.0	19.1

CONCLUSIONS

Hospital Viewpoints on Marketing Techniques

In the first five questions, the administrators' views, no matter what type of hospital, are very similar. All the hospital means are within one number (on the ranking scale of 1 - 5) of each other for all types of marketing forms leading to the conclusion that all hospitals answering the survey view a marketing form with the same importance.

Hospital Use of Marketing Techniques

Tables 9-12 show the percentage use of individual marketing forms by the different types of hospitals. In order to test the first hypothesis that the differences between for-profit and not-for-profit hospitals are insignificant when compared to the differences between private and public hospitals and the second hypothesis in which it states urban hospitals use marketing practices much more than rural hospitals, the following tables (Table 16-22) are needed. Question nine and ten are not analyzed in this way because both of these questions are extensions of question eight which is analyzed.

TABLE 16: Differences in the Use of Advertising Forms
(question one.- percent)

Type of Hosp.	News- paper	Radio	Bill- board	Maga- zine	TV	Direc- tory	Direct Mail
Private - Public	17.9	29.7	31.8	23.3	27.6	(.4)	26.5
Profit - No Prof	(9.4)	(1.1)	(1.7)	16.5	10.2	1.3	5.2
Urban - Rural	8.7	22.7	50.5	86.8	49.8	16.4	45.4

TABLE 17: Differences in the Use of Publicity Forms
(question two - percent)

Type of Hosp.	News story	Contest	Event	Health Fair	Seminar
Private - Public	10.0	19.7	36.7	(4.9)	31.8
Profit - No Profit	4.1	.7	(16.5)	(2.8)	(15.6)
Urban - Rural	8.7	13.3	35.8	37.8	28.4

TABLE 18: Differences in the Use of Sales Promotion Forms
(question three - percent)

Type of Hosp.	Discounts	Free testing	Coupons
Private - Public	17.4	14.4	22.1
Profit - No Profit	12.4	(6.0)	7.1
Urban - Rural	26.5	27.3	31

TABLE 19: Differences in the Use of Physician Influences
(question five - percent)

Type of Hosp.	Comp	Serv	Facil	Offc	Reloc	Incom	Supp	Equip
Private - Public	14.0	21.1	9.4	8.1	10.8	4.2	(8.2)	(5.6)
Profit - No Profit	(16)	3.6	(7.1)	9.1	8.5	(24)	(29)	(19)
Urban - Rural	23.7	26.1	(4.8)	11.9	2.9	(5.6)	(3.7)	(10)

TABLE 20: Differences in the Use of Activities for Visitors
 (question six - percent)

Type of Hosp.	Activities	Videos	Snacks	Staff Support
Private - Public	5.1	19.6	15.8	10.7
Profit - No Profit	(4.7)	(2.9)	(6.1)	2.4
Urban - Rural	12.6	19.2	3.1	9.3

TABLE 21: Differences in the Use of Evaluation Forms
 (question seven - percent)

Type of Hosp.	Evaluation Form
Private - Public	8.4
Profit - No Profit	(2.9)
Urban - Rural	9.7

TABLE 22: Differences in the Use of Follow-Up
(question 8 - percent)

Type of Hosp.	Follow Up
Private - Public	35.3
Profit - No Profit	2.5
Urban - Rural	37.0

Tables 16-22 show the differences between the percentage of private versus public, for-profit versus not-for-profit, and urban versus rural who use each marketing practice. In order to prove the first hypothesis, hypothesis testing is used to compare the two populations of for-profit versus not-for-profit and also, for the second hypothesis, private versus public hospitals. An example of the procedure is done for the first hypothesis of the advertising form of newspaper ads.

For-profit hospitals = p_1 $\alpha = .05$

Not-for-profit hospitals = p_2

Total sample = \hat{p}

X = # of hospitals who use newspaper ads

n = # of hospitals surveyed

$$H_0 : p_1 = p_2$$

$$H_a : p_1 \neq p_2$$

$$p_1 = X_1/n_1 = 29/32 = .9063$$

$$p_2 = X_2/n_2 = 30/30 = 1.000$$

$$\hat{p} = (X_1 + X_2) / (n_1 + n_2) = 29 + 30 / 32 + 30 = .9516$$

$$s_p(D) = \hat{p} (1-\hat{p}) (1/n_1 + 1/n_2) = .9516 (1-.9516) (1/32 + 1/30) = .0545$$

$$z = p_1 - p_2 / s_p(D) = .9063 - 1.000 / .0545 = 1.72$$

$$P (|Z| > |z|)$$

$$P (|Z| > 1.72) = .0427$$

REJECT H

Private hospitals = p_1 $\alpha = .05$

Public hospitals = p_2

Total sample = \hat{p}

X = # of hospitals who use newspaper ads

n = # of hospitals surveyed

$$H_0 : p_1 = p_2$$

$$H_a : p_1 \neq p_2$$

$$p_1 = X_1/n_1 = 41/62 = .6613$$

$$p_2 = X_2/n_2 = 8/22 = .3636$$

$$\hat{p} = (X_1 + X_2) / (n_1 + n_2) = 41 + 8 / 62 + 22 = .5833$$

$$s_p(D) = \hat{p} (1-\hat{p}) (1/n_1 + 1/n_2) = .5833 (1-.5833) (1/62 + 1/22) \\ = .1223$$

$$z = p_1 - p_2 / s_p(D) = .6613 - .3636 / .1223 = 2.43$$

$$P (|Z| > |z|)$$

$$P (|Z| > 2.43) = .0075$$

REJECT H

In both examples, there is sufficient evidence that the difference in the use of newspaper for advertising in for-profit versus not-for-profit and public versus private can also be true for the total population. Also the difference between public and private is more significant than the difference between for-profit and not-for-profit (.4027 > .0075). The following charts show the results of the calculations for the rest of the marketing forms. A Y below the P-value means the difference between the two hospital types is significant while a N means there is no significant difference.

TABLE 23: P-values for the Use of Advertising Forms
(question one - percent)

Type of Hosp.	News- paper	Radio	Bill- board	Maga- zine	TV	Direc- -tory	Direct Mail
Private	.0075	.0075	.0055	.0188	.0107	.4880	.0150
- Public	Y	Y	Y	Y	Y	N	Y
Profit -	.0427	.4641	.4483	.0853	.2090	.4522	.4562
No Prof	Y	N	N	N	N	N	N
Urban -	.0985	.0174	<	<.0002	<.0002	.0427	<.0002
Rural	N	Y	.0002	Y	Y	Y	Y
			Y				

TABLE 24: P-values for the Use of Publicity Forms
(question two - percent)

Type of Hosp.	News story	Contest	Event	Health Fair	Seminar
Private -	.0985	.0559	.5000	.1562	.0004
Public	N	N	N	N	Y
Profit -	.2810	.4761	.4602	.3085	.0132
No Profit	N	N	N	N	Y
Urban -	.0985	.0985	<.0002	<.0002	.0019
Rural	N	N	Y	Y	Y

TABLE 25: P-values for the Use of Sales Promotions Forms
(question three - percent)

Type of Hosp.	Discounts	Free testing	Coupons
Private -	.0808	.1020	.0268
Public	N	N	Y
Profit - No Profit	.1587	.2946	.2843
	N	N	N
Urban - Rural	.0068	.0034	.0009
	Y	Y	Y

TABLE 26: P-values for the Use of Physician Influences
(question five - percent)

Type of Hosp.	Comp	Serv	Facil	Offc	Reloc	Incom	Supp	Equip
Private -	.161	.023	.201	.281	.206	.378	.278	.345
Public	N	Y	N	N	N	N	N	N
Profit -	.121	.352	.261	.233	.261	.044	.024	.109
No Profit	N	N	N	N	N	Y	Y	N
Urban -	.026	.002	.341	.176	.401	.316	.382	.209
Rural	Y	Y	N	N	N	N	N	N

TABLE 27: P-values for the Use of Activities for Visitors
(question six - percent)

Type of Hosp.	Activities	Videos	Snacks	Staff Support
Private -	.1635	.0222	.0233	.1814
Public	N	Y	Y	N
Profit -	.1922	.3121	.0708	.3015
No Profit	N	N	N	N
Urban -	.0901	.0294	.3557	.1292
Rural	N	Y	N	N

TABLE 28: P-values for the Use of Evaluation Forms
(question seven - percent)

Type of Hosp.	Evaluation Form
Private - Public	.1335 N
Profit - No Profit	.3336 N
Urban - Rural	.1292 N

TABLE 29: P-values for the Use of Follow-Up
(questions 8 - percent)

Type of Hosp.	Follow Up
Private - Public	<.0002 Y
Profit - No Profit	.2546 N
Urban - Rural	<.0002 Y

Tables 23-29 show whether the differences in the marketing practices of the sample are significant for the Texas population. For the first hypothesis, the P-values are compared (private-public versus for-profit - not-for-profit) to see if the P-value of for-profit - not-for-profit is greater than the P-value of private - public. This is the case in all marketing practices (question 1-8) except

Question 1: Directory

Question 2: Event

Question 5: Hospital-physician computer linkage,
Discounted office space for private practice,
Minimum annual income guarantee, Office and
administrative support services, Medical
equipment assistance

For the second hypothesis (urban - rural), urban usage for the sample population of the different marketing practices exceeds the sample rural population's usage in all marketing practices except:

Question 5: Quality of facilities, Minimum annual income
guarantee, Office and administrative support
services, Medical equipment assistance

Using P-values, the difference is insignificant for the following

Question 1: Newspaper

Question 2: News story, Contest

Question 5: Quality of facilities, Discounted office space for private practice, Relocation reimbursement, Minimum annual income guarantee, Office and administrative support services, Medical equipment assistance

Question 6: Activities to pass the time, Complimentary coffee or snack, Hospital staff to visit or offer support

Question 7: Evaluation forms

IMPORTANCE

This study analyzes the differences and similarities between the marketing practices of different categories of hospitals. It is important for hospitals to know what other hospitals, their competition, are doing in order to keep and increase their share of customers. Furthermore, if a hospital finds its business has leveled off, it may find marketing ideas from what other hospitals are doing. If most hospitals are successfully implementing a particular marketing technique, then possibly this method could prove equally effective for that particular hospital. This study is also beneficial in that hospitals listed other forms of marketing that they use which may create new ideas for other hospitals. Finally, the results of the survey are important for other health care facilities, such as health maintenance organizations. Since hospitals constitute their primary competition, any information concerning hospital marketing techniques can only increase their customer flow.

Although the use of marketing methods is relatively easy to collect, the effectiveness of these marketing techniques is hard to measure. The goal of hospital marketing involves influencing the patient so that when the actual need arises for hospital care, the patient will automatically choose a particular hospital. Hospital marketing is still a relatively new field, but it has already become an indispensable component of strategic management in health care.

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- DeSalvo, C.P. More small, rurals begin using marketing. Hospitals. 1986. April 5: 65.
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APPENDIX A

Hospital _____

Your name _____

Position _____

Would you like a copy of the report's executive summary? ____ Yes ____ No

What is the licensed capacity (in number of beds) of your hospital? _____

Which description best classifies your hospital?

_____ Urban _____ Rural

Use the following values to answer the questions 1 - 5:

- (1) Very important
- (2) Important
- (3) No opinion
- (4) Unimportant
- (5) Very unimportant

- 1 a. Using the scale above, circle the number which best describes your opinion of the importance of the following **advertising** forms to influence patients, either directly or through an influential other, to come to your hospital?

	Important		----->	Unimportant
Newspaper	1	2	3	4 5
Radio	1	2	3	4 5
Billboard, transit ad	1	2	3	4 5
Magazine	1	2	3	4 5
Television	1	2	3	4 5
Directory (ex: Yellow Pages)	1	2	3	4 5
Direct mail	1	2	3	4 5

- b. What advertising forms does your hospital use? (Circle the applicable advertising forms mentioned above or add new ones.) _____

- 2 a. Circle the number which best describes your opinion of the importance of the following **publicity** forms to influence patients, either directly or through an influential other, to come to your hospital?

	Important		----->	Unimportant	
	1	2	3	4	5
News story	1	2	3	4	5
Contest (ex: coloring contest for kids)	1	2	3	4	5
Hosting an athletic event	1	2	3	4	5
Health fair	1	2	3	4	5
Public seminar on a health related topic	1	2	3	4	5

- b. What publicity forms does your hospital use? (Circle the applicable publicity forms mentioned above or add new ones.) _____

- 3 a. Circle the number which best describes your opinion of the importance of the following **sales promotion** forms to influence patients, either directly or through an influential other, to come to your hospital?

	Important		----->	Unimportant	
	1	2	3	4	5
Discounts	1	2	3	4	5
Free testing, screening	1	2	3	4	5
Coupon	1	2	3	4	5

- b. What sales promotion forms does your hospital use? (Circle the applicable sales promotion forms mentioned above or add new ones.) _____

- 4 a. Circle the number which best describes your opinion of the importance of the following to influence patients, either directly or through an influential other, to come to your hospital?

	Important		----->	Unimportant	
	1	2	3	4	5
Advertising	1	2	3	4	5
Publicity	1	2	3	4	5
Sales promotions	1	2	3	4	5
Word of mouth	1	2	3	4	5
Recommendation of physician	1	2	3	4	5

- b. What other media do you feel are important to influence patients to come to your hospital? _____

- 5 a. Circle the number which best describes your opinion of the importance of the following to influence physicians to send their patients to your hospital.

	Important		----->	Unimportant	
	1	2	3	4	5
Hospital-physician computer linkage	1	2	3	4	5
Quality of services	1	2	3	4	5
Quality of facilities	1	2	3	4	5
Discounted office space for private practice	1	2	3	4	5
Relocation reimbursement	1	2	3	4	5
Minimum annual income guarantee	1	2	3	4	5
Office and administrative support services	1	2	3	4	5
Medical equipment assistance	1	2	3	4	5

- b. What physician influencing methods does your hospital use? (Circle the applicable methods mentioned above or add new ones.)

6. Please check any of the activities listed below that your hospital provides to patients' visitors.

_____ Activities to pass the time if there is a wait

_____ Videos on the patient's illness or other health topics

_____ Complimentary coffee or snack

_____ Hospital staff to visit or offer support

_____ Other (Please explain) _____

7. Does your hospital have an evaluation form for patients to fill out before or while they are checking out?

_____ Yes _____ No

8. Does your hospital follow-up on discharged patients? (If **yes**, please answer Question 9 and 10.)

_____ Yes _____ No

9. How does your hospital follow-up on discharged patients?

_____ Mail

_____ Telephone

_____ Other (Please explain.) _____

10. How long after the discharge is follow-up done? _____

APPENDIX B

«DATA Plan»

November 26, 1990

«hospital»
«M». «addressee»
«title»
«address»
«city», «state» «zip»

Dear «M». «last»:

As a senior honor student at Texas A&M University, I am currently involved in the University Honors Fellows Program. The Fellows program involves a group of Texas A&M seniors who develop individual research projects with the help of a faculty advisor.

My research project looks at how general acute care hospitals in Texas influence patients to utilize their services. The results of the attached survey will be compared based on the following hospital characteristics:

- 1) Public vs Private
- 2) For-profit vs Not-for-profit
- 3) Rural vs Urban
- 4) Bed size

Your answers to the attached survey will help my advisor, Dr. Donald A. Sweeney, Associate Director of the Center for Urban Affairs, and me complete what we believe to be a useful research project. As I need to know which hospitals have submitted what information, the surveys are not anonymous; however the report will not identify information coming from any particular hospital or person. The completed questionnaires will also be destroyed after they are analyzed. I would appreciate your response by December 15th in order to have enough time to reduce and analyze the data. Also, I would be happy to send you a copy of the report's executive summary when it is complete in the spring of 1991 (please check the box on the questionnaire if you would like a copy).

Sincerely,

Cynthia DeCoursin
Fellows Scholar

Enclosure

«DATA Plan»

January 30, 1991

«hospital»

«M». «addressee»

«title»

«address»

«city», «state» «zip»

Dear «M». «last»:

As a senior honor student at Texas A&M University, I am currently involved in the University Honors Fellows Program. The Fellows program involves a group of Texas A&M seniors who develop individual research projects with the help of a faculty advisor.

In late November, I sent you a survey for my research project. I have not received a response back and am writing this letter in case the first one did not reach you or was lost. Your response is very valuable and will affect the usefulness of this research project.

In case the first letter did not reach you, my research project looks at how general acute care hospitals in Texas influence patients to utilize their services. The results of the attached survey will be compared based on the following hospital characteristics:

- 1) Public vs Private
- 2) For-profit vs Not-for-profit
- 3) Rural vs Urban
- 4) Bed size

Your answers to the attached survey will help my advisor, Dr. Donald A. Sweeney, Associate Director of the Center for Urban Affairs, and me complete what we believe to be a useful research project. As I need to know which hospitals have submitted what information, the surveys are not anonymous; however the report will not identify information coming from any particular hospital or person. The completed questionnaires will also be destroyed after they are analyzed.

I would appreciate your response by February 15th in order to have enough time to reduce and analyze the data. Also, I would be happy to send you a copy of the report's executive summary when it is complete in the spring of 1991 (please check the box on the questionnaire if you would like a copy).

Sincerely,

Cynthia DeCoursin
Fellows Scholar

Enclosure