

FILE COPY

2

AD-A203 012

UTILIZATION OF A MARKETING STRATEGY  
AT  
NAVAL REGIONAL MEDICAL CENTER GREAT LAKES  
GREAT LAKES, ILLINOIS

DTIC  
ELECTE  
JAN 23 1989  
S D  
&D

A Graduate Research Project  
Submitted to the Faculty of  
Baylor University  
In Partial Fulfillment of the  
Requirements for the Degree  
of  
Master of Health Administration

DISTRIBUTION STATEMENT A  
Approved for public release  
Distribution Unlimited

by

Kathleen A. Hiatt  
LCDR, NC, USN

June 1, 1983

89 1 18 053

## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; Distribution unlimited	
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE			
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 98-88		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION U.S. Army-Baylor University Graduate Program in Health Care	6b. OFFICE SYMBOL (if applicable) Admin/HSMA-IHC	7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State, and ZIP Code) Ft Sam Houston, TX 78234-6100		7b. ADDRESS (City, State, and ZIP Code)	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (if applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS	
		PROGRAM ELEMENT NO.	PROJECT NO.
		TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Utilization of A Marketing Strategy At Naval Regional Medical Center Great Lakes, Great Lakes, Illinois			
12. PERSONAL AUTHOR(S) LCDR Kathleen A. Hiatt, USN			
13a. TYPE OF REPORT Study	13b. TIME COVERED FROM Jul 82 TO Jul 83	14. DATE OF REPORT (Year, Month, Day) 83 June	15. PAGE COUNT 97
16. SUPPLEMENTARY NOTATION			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP	
		Health Care, Applying Marketing in a Military Health Care Setting	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This study examines the question of whether or not civilian marketing practices and principles can be applied in the military health care setting. Using the NRMC Great Lakes as a basis, the answer is yes--consumers of military medical care are ready to be the recipients of health care marketing. The author found that several areas of need in the target market were not being satisfied by this naval MTF, despite the fact that it believed it was doing a good job. She believes that the military health care system may greatly benefit from the adoption of civilian marketing principles, but feels that there may be barriers to this occurring as well. Marketing will attune each military medical facility to its unique consumers. (KR) ←			
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION	
22a. NAME OF RESPONSIBLE INDIVIDUAL Lawrence M. Leahy, MAJ, MS		22b. TELEPHONE (Include Area Code) (512) 221-6345/2324	22c. OFFICE SYMBOL HSMA-IHC

## TABLE OF CONTENTS

Chapter	
I.	INTRODUCTION. . . . . 1
	A Marketing Concept . . . . . 1
	Hospitals and Marketing . . . . . 1
	Marketing and the Military Health Care System . . . . . 4
	Conditions Which Prompted the Study . . . . . 7
	Statement of the Applied Research Question. . . . . 8
	Objectives. . . . . 8
	Criteria. . . . . 9
	Assumptions . . . . . 9
	Limitations . . . . . 10
	Review of the Literature. . . . . 10
	Research Methodology. . . . . 16
	Footnotes . . . . . 21
II.	DISCUSSION. . . . . 22
	Preliminaries . . . . . 22
	Analysis of the Market. . . . . 22
	Development of the Marketing Mix. . . . . 29
	A Marketing Mix--Recommendations for Branch Clinic 237. . . . . 31
	Footnotes . . . . . 36
III.	CONCLUSIONS . . . . . 37
	Answering the Applied Research Question . . . . . 37
	Summary of the Steps of a Marketing Strategy. . . . . 38
	Applicability to the Military Health Care System. . . . . 38
APPENDIXES. . . . . 44	
	A. Definitions . . . . . 44
	B. "Training Precedes Victory"; The Service School Command. . . . . 48
	C. Guidelines for Focus Group Interviews . . . . . 53
	D. Classification of Needs . . . . . 56
	E. Questionnaire for the Service School Command. . . . . 61
	F. Sample Size Determination . . . . . 67

G. A Priori Management Philosophy . . . . .	71
H. Results of the Questionnaires . . . . .	76
I. Determination of the Proportion of Unmet Needs in the Target Market . . . . .	79
SELECTED BIBLIOGRAPHY . . . . .	90



Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

## I. INTRODUCTION

### A Marketing Concept

Marketing is a philosophy and a strategy common in the business world today. Most of the business community is interested in self perpetuation through profit. Ultimately, a marketing philosophy will enhance those profits.

Profits are not usually generated by the one time purchase of a firm's goods or services but by the repeat purchase of those goods and services. A one time purchaser is created when a consumer perceives that a particular firm's services or goods will satisfy one of his current needs. He is willing to exchange something of value (usually money) for those goods or services. If the consumer perceives that this firm's ability to satisfy his need is greater than that of any other firm, he will purchase the good or service from the firm whenever that particular need arises. Each time he purchases the good or service he will exchange something of value for them. Business firms use marketing to facilitate this exchange relationship.

When a firm adopts a marketing concept, it believes that the consumer's needs should be the primary focus of the firm and that resources should be organized to satisfy those consumer needs.<sup>1</sup> Adopting the marketing concept requires an organization to: (1) define its mission and objectives, (2) audit its current operations, (3) identify its consumers or potential

consumers (target markets), (4) determine the needs or perceived needs of their consumers, and (5) identify and offer the means of satisfying those needs in a manner valuable to the consumer.<sup>2</sup> Because of this, marketing is a means of encouraging repeat purchasers. Therefore, use of marketing may increase the profits and longevity of a business.

#### Hospitals and Marketing

Currently, there is a plethora of books, articles and seminars relating marketing tools to the hospital industry. Why the sudden interest in marketing? The environment in which the hospital is functioning has recently undergone several drastic changes. Marketing may be the means by which hospitals will survive in the new environment. In order to understand this, the historical and current environments of the hospital will be touched upon briefly.

Historically, the hospital "is the expression of a man's inalienable right to be well and is the formal recognition by the community of its responsibility for providing the means of keeping him well or of restoring lost health. This right and this responsibility belong to all strata of society... This right and this responsibility also determine the functions of the hospital today."<sup>3</sup>

This historical viewpoint can be examined in marketing terminology. Society had an unmet need, the need to keep its

members healthy and well. Hospitals had the means to restore health (in certain instances). Society offered valuable resources to the hospital in exchange for the health of its members. As long as society continued to perceive the hospital's services as valuable, hospitals received such resources as donations and funding for their operations, prestige for their vital members, and exemptions from certain restraints (i.e., taxation on investment income). This was a copesetic relationship requiring very little effort on the part of the hospital to maintain.

The 1970's saw several indicators that society was no longer as satisfied with the relationship as it had been previously. Society appeared dissatisfied not only with the types of services rendered, but the manner in which they were rendered. As a result, society was no longer as willing to give unrestricted valuable resources to the hospitals. Some specific indicators of this growing dissatisfaction are:

1. An increase in the number and severity of malpractice suits filed against health care providers, culminating in the malpractice crisis of the 1970's.<sup>4</sup>

2. Several landmark legal decisions made and legislative actions passed assigning responsibility to hospitals, especially for the care given within those hospitals. The Darling case, mandated health care planning, utilization review,

certificates of need and temporary ceilings on hospital charges are all examples of society's attempt to control an industry with which it is no longer satisfied.

3. Hospital occupancy rates have decreased as consumers sought alternatives to the traditional providers, traditional services and traditional settings.<sup>5</sup> These alternatives were sought as consumers were unable or unwilling to pay the skyrocketing costs of hospital care.

In marketing terminology, hospitals were no longer providing services that the consumer perceived as valuable. Therefore, the consumer was less willing to exchange something of value for those services. It is obvious that the hospital and the society in which it was embedded were no longer communicating.

Hospitals have realized marketing is the answer to the communication problem. Marketing strategy, marketing mix and ultimately the marketing orientation will allow hospitals to persevere and possibly thrive in a somewhat hostile environment.

#### Marketing and the Military Health Care System

More and more people are beginning to comprehend the importance of marketing in the civilian hospital industry. When marketing is mentioned in relation to the military hospital and health care system several strong responses are elicited. These



responses are usually stated as reasons why marketing is not needed and not applicable to the military hospital and health care system. Surprisingly, the arguments are very similar to the common barriers encountered when marketing was first introduced to the civilian health care community.<sup>6</sup> Some of the more common arguments are:

1. We don't need to market because we are not interested in profits.
2. We don't need to advertise, we have a "captive" population.
3. We don't need to do market research, we know what the consumer wants.

With close scrutiny of these common arguments, it can be seen the military health care system does need to use marketing.

Although military hospitals are not interested in a "profit," they do require the constant input of resources to survive. To secure these resources, military hospitals must compete with other hospitals and with other interests at various levels (e.g., within the Navy Medical Command, Department of the Navy, or the Department of Defense). Therefore, the allocation of resources to a military hospital may be adversely affected subject to the satisfaction and actions of its many consumers.

One group of consumers, the recipients of military medicine, does not exist in a vacuum, nor is it necessarily a "captive" population. Through the media and personal experiences they are familiar with the state-of-the art of hospital care in the civilian community. When similar care is not available in a manner acceptable to them, in the military hospital, often the military care rendered is perceived as inadequate.

When this group of consumers is dissatisfied, several alternatives are available to them. They may choose to use their own funds for medical care, apply for CHAMPUS benefits or go without the needed services. They may also choose to complain to a higher authority. They may use the chain of command in the line community and the military hospital or a direct approach to any of their congressmen to indicate their dissatisfaction. The choice to use any of these alternatives may result in the potential loss or reallocation of valuable resources.

Resources may also be affected by groups not usually thought of as consumers. As the military system, including the hospital and health care system, is funded by the taxpayers of the United States, it may be considered a public entity. As a public entity, the operation of the military is subject to scrutiny by the people funding it or their advocates. If the taxpayers, or their representatives, perceive the military health

care system is run in a less than efficient or effective manner, the allocation of resources again may be adversely affected.

There are many other consumers of the military health care system, but only one more will be mentioned at this time. The line community (the operational forces) of the Navy is a major consumer of military hospital and health care services. If this major consumer perceives its needs are not being satisfied by the military health care system, one can imagine the uproar. History has shown how rapidly resources within the health care system can be reorganized and reallocated due to the dissatisfaction of this important consumer.

Not only in the civilian community must a hospital be aware of consumers and consumer needs for the input of valuable resources, it is apparent that military medicine faces similar problems as their civilian counterparts. Marketing and the marketing philosophy are being incorporated into the management of civilian facilities with tentatively good results. The military health care and hospital system would be prudent to examine marketing strategies and philosophies for possible incorporation into the delivery of health care in the military hospital and health care setting.

#### Conditions Which Prompted the Study

During the didactic phase of the U.S. Army-Baylor program the author was introduced, for the first time, to the

concept and value of marketing. An organization that has adopted marketing as a managerial philosophy identifies the needs of the consumers it serves (or intends to serve), and organizes its resources to meet those needs in an effective and efficient manner. The resulting consumer satisfaction is a powerful factor in the organization's longevity.<sup>7</sup> From personal experience and observation, it appears to the author the military health care system at time loses track of the actual needs of its consumers. Marketing may be able to correct this without changing the structure or mission of the military system. This research project allows for the exploration and verification of this belief.

#### Statement of the Applied Research Question

The applied research question to be answered in this study through the development and recommended implementation of a marketing strategy at Naval Regional Medical Center Great Lakes is: Are civilian marketing practices and principles applicable to the military health care setting?

#### Objectives

There are five objectives which must be accomplished to answer the applied research question. The first objective is to expand the resident's knowledge base of the practices and principles of marketing as they are currently utilized in the civilian health care setting through an in-depth study of the same. The second objective is to identify the needs and perceived needs

of the target market and to classify these needs into price, place, produce and promotion. The third is to compare the needs of the target market to the available means of satisfying those needs and to statistically analyze the level at which the needs of the target market are currently being met at Naval Regional Medical Center Great Lakes. The fourth objective is to demonstrate an appropriate marketing mix for Naval Regional Medical Center Great Lakes based on the analyzed data and the current management philosophy at NRMC Great Lakes. The last objective is to summarize the marketing strategy steps utilized so they may be understood by non-marketing personnel and applied to other military medical facilities.

#### Criteria

There are three criteria in this research project. First, the marketing plan and model used, as well as the marketing mix developed, will fit into the existing military health care system. Second, statistical analysis will be at the .05 level of significance. Third, managers involved in those areas of the Naval Regional Medical Center in which needs have been identified will set, a priori, a percentage level at which needs must be unmet before they will consider change.

#### Assumptions

It is assumed that: (1) permission will be obtained from the appropriate authorities to conduct the study, (2) the

needs of the Service School Command may be identified through focus group interviews and a simple questionnaire, and (3) sufficient numbers of the target market will respond to the interview and questionnaire to meet sample size requirements.

#### Limitations

This study is limited by the unavailability of computer support. Therefore, data gathering will be done through interviewing and a simple questionnaire. Any statistical calculation required will be done using a hand calculator. The study is limited to the one target market selected by the health care resident and approved by the preceptor. The target market is limited to a group of consumers easily identifiable by the resident without in-depth demographic data collection. The outcome is limited to recommendations since the resident does not have the authority to implement any changes identified as needed by the study. Lastly, the research will be done in a timely manner without added cost to the command.

#### Review of the Literature

The purpose of the literature review was to expand the resident's knowledge base of the principles and practices of marketing as they are currently utilized in the civilian health care setting. To accomplish this objective, current (from 1978 to the present) health care and marketing literature was reviewed and personal interviews were conducted with four marketing

managers in area hospitals. Overall, the literature revealed there is still some confusion in determining what marketing is and what it is doing in the health care field. There has been a gradual change in the content of the articles addressing marketing in the health care arena over the past several years. Early literature (prior to the mid 1970's) was relatively devoid of any discussion of marketing in health care. The first articles to appear fell into one of two groups. The first group contained either those articles concerned with defining marketing (or rehashing Kotler's (1975) definition of marketing); explaining (theoretically) the technical methods of adopting business marketing principals and techniques to the hospital setting; or attempting to explain marketing terminology in lay terms. The other group of articles addressed the morality of the situation, e.g., answering (both pro and con) the question: "Is it ethical for a hospital to market its services?"

In the late 1970's and early 1980's, as hospitals began to realize their survival depended on their ability to identify and respond to consumer needs (where "consumer" is not restricted to patients but includes physicians, hospital employees, or potential patients), a new category of articles began to appear. Hospitals became interested in the "how to's" of marketing, e.g., applying marketing strategies. This interest generated not only a proliferation of related articles, but seminars and short

courses on the subject were offered by institutions such as the American Hospital Association.<sup>8</sup> In spite of the seminars and the articles presented in health care publications there is still a wide variety of opinions, definitions and concepts indicating that the civilian community remains somewhat confused about the application of marketing to the hospital setting. There continues to be a need for further documentation of applied marketing in relation to the health care community.<sup>9</sup>

In an attempt to ascertain the actual state-of-the-art of marketing in the health care field, interviews were conducted by the health care resident with the managers of four hospital marketing departments. The divergence of opinions and practices reflected in the literature were also found in these interviews. The interviews were conducted with: Mr. Dan Beckham, Highland Park Hospital; Ms. Sharon Oxendale, Lutheran General Hospital; Ms. Joyce Fitzgerald, Lake Forest Hospital; and Mr. Norbert Gumbinger, St. Therese Hospital.

Marketing practices were utilized by all of these managers but in different manners. The epitome of marketing, Highland Park Hospital appeared to have adopted a complete "Consumer is King!" attitude. The marketing department, under Mr. Beckham, has several divisions including marketing research, development and implementation. Mr. Beckham freely discussed the various consumers, the competition and many tools the department



has used to identify and reach various consumers. The first impression of this resident was that this hospital certainly was successful in adopting the total marketing philosophy. This impression continued until some "difficulties" with the nursing staff were discussed. They (the nursing staff) were being resistant to the imposing of the 'consumer is king' philosophy within the hospital. It was the opinion of the nursing staff that nurses have always thought the patient was the focal point of the health care system. Therefore, they did not need to adopt this philosophy. This seemed to indicate that although market analysis, market research, and external promotion were taking place, Highland Park Hospital still had some work to do on its internal promotion of the marketing philosophy.

The antithesis of Mr. Beckham and Highland Park Hospital was Mr. Gumbinger, St. Therese Hospital. The interview opened with Mr. Gumbinger informing the resident that, pure and simple, marketing is selling. Mr. Gumbinger (and St. Therese Hospital) have added several seemingly excellent programs (including an adjacent doctors' office building, parking garage and an emergency telephone system) to meet consumer needs. The programs were implemented prior to researching the consumer demand for the same. Now St. Therese Hospital is trying to "market" said programs with little success. For example, there is a low occupancy rate in the doctors' office building. The doctors' office

building is considered part of the Roman Catholic hospital and restrictions on the leasing of the offices have been in keeping with the teachings and philosophy of the Catholic Church. Doctor's are forbidden to prescribe birth control measures, encourage abortions or perform vasectomies in these offices. As there are other physician office buildings in proximity and another community hospital within one mile of St. Therese, the demand for the office building at St. Therese is limited. Mr. Gumbinger and St. Therese Hospital remain in the stage of marketing development described by McCarthy as a production oriented philosophy (where an organization focuses its resources on making things and then attempts to "sell" them) as opposed to a marketing philosophy (where the organization focuses first on consumer needs and then on the products to offer to satisfy those needs),<sup>10</sup>

Lutheran General Hospital and Lake Forest Hospital fall between the above two extremes. There is not a separate marketing department at Lutheran General but the marketing function is combined with the planning department. Ms. Oxendale, Vice-President of this department, revealed how marketing was used in that facility. Lutheran General Hospital preferred to periodically hire experts in the field of marketing research rather than to increase its staff. They did this in response to falling occupancy and revenue. Based on the results of the

marketing research Lutheran General Hospital has planned, built and opened an ambulatory care center. They have also included other marketing research findings in their long term organizational plan. Ms. Oxendale was quick to point out that the hiring of outside marketing research experts is not always the first step. There is a vast amount of data available to a health care institution from inexpensive or "free" sources. The most recent census, planning documents of the local health systems agency and surveys from local colleges or universities may greatly expand an institution's demographic data base for minimal investment of resources other than the perseverance and the elbow grease needed for uncovering these facts out.

The last facility, Lake Forest Hospital, does not market per Ms. Fitzgerald, Director of Public Relations. In spite of this, Ms. Fitzgerald's department has engaged in many activities which closely resemble those activities labeled as marketing in both the literature and at other facilities. For example, there are many instances where Lake Forest Hospital has identified a need in the community and has developed a service to meet that need. One illustration of this is the extended care facility of Lake Forest Hospital. Lake Forest Hospital serves a very established and a very wealthy community. The members of the community needing an extended care facility did not desire to leave the environment to which they were accustomed. Lake Forest

Hospital applied the knowledge of this need to their extended care facility. The common areas of the extended care facility contain fine furniture and art work. Entertainment for the residents may be a string quartet or something of a similar nature. Needless to say, there is a waiting list of consumers desiring to enter this facility.

No one best way of utilizing marketing practices emerged during this phase of the research project. It was found that in general, it is necessary to know your consumer, to know your organization, and to know where and how the two should meet. This is in keeping with Clarke's opinion, that the implementation of a marketing strategy for any health care organization, is dependent upon the specific environment in which the hospital finds itself embedded.<sup>11</sup>

#### Research Methodology

The research methodology is best presented as the four stages of the research project: (1) the preliminary stage, (2) the market analysis stage, (3) the quantitation stage and (4) recommendation of a marketing mix. A review of the current literature, as it pertains to each of these stages, has been incorporated into the following discussion of each stage.

#### The Preliminary Stage

In the preliminary stage of the project, a thorough review of current marketing philosophies, strategies and

practices was conducted. To further examine how these strategies were being applied, interviews were conducted with managers of marketing departments in several civilian hospitals in the greater Chicago area. The hospitals were selected based upon their location, their willingness to participate and their participation in a recent hospital marketing survey conducted by the North Shore magazine.

From the literature review and the interviews at civilian hospitals a marketing strategy for Naval Regional Medical Center Great Lakes (NRMC Great Lakes) was developed.

#### The Market Analysis Stage

A true marketing organization does not develop programs or services and then determine how to "market" them to their consumers. The key to a marketing program is first researching to identify consumer needs, identifying current capabilities of the organization to meet those needs and evaluating the level of satisfaction of the consumer with the current capabilities. Then is the time to reorganize or change services to meet the needs of the consumer.<sup>12</sup>

The purpose of this market analysis stage is to identify and evaluate the consumer needs and the ability of NRMC Great Lakes to satisfy those needs. This will be accomplished by completing several tasks. During this phase of the research project one target market from the many markets served by NRMC

Great Lakes will be selected. After discussion with the preceptor, the target market has been identified. It is to be the Service School Command, Naval Training Center Great Lakes. The target market is discussed in Appendix B and rationale for the selection of the target market will be discussed further in the next chapter of the graduate research project.

The needs of the target market will then be determined by focus group interviewing. Focus group interviewing, a qualitative marketing research tool, is used to identify choice factors of concern to a target market. Participants in these interviews will be designated by the Service School Command.

After the initial focus group interviews several things will happen:

1. The identified needs will be classified into price, place, product and promotion categories.
2. An audit of the services available at the NRMC Great Lakes to satisfy the needs of the target market will be conducted. The audit will be conducted in Branch Clinic 237 and Building 200-H. These are the two areas of services available to the Service School Command. The audit will be conducted by the health care resident. Information will be gathered from the managers of the areas, the staff in the areas and by direct

on-site observation by the resident. Interview guidelines will be the needs identified by the Service School Command.

3. From the information gathered above a questionnaire, a quantitative marketing research tool, will be developed. It will test the proportion of Service School Command which perceives those specific needs are either met or unmet by the services at NRM Great Lakes.

4. The questionnaire will be administered to an appropriate sample size of Service School Command members, randomly selected from various staff groups of the Service School Command. Random selection of the queried group will be based on drawing names from a hat.

#### The Quantitation Stage

The third stage of the study is the quantitation stage. Using the binomial test, the proportion of the Service School Command population perceiving each need as met or unmet will be determined. These percentages will be compared to levels which the managers of the health care services have set a priori, as the level at which change should occur.

#### The Marketing Mix

Based on the results of the quantitation stage and the levels set a priori, a marketing mix will be developed and presented in the final stage of the discussion chapter: A Marketing Mix--Recommendations for Branch Clinic 237.

The recommendations will be presented to the Officer In Charge, Branch Clinic 237; the Regional Coordinator for Branch Clinics and the Commanding Officer, NRMC Great Lakes.



## FOOTNOTES

<sup>1</sup>E. Jerome McCarthy, Basic Marketing, 6th Edition. (Homewood: Richard D. Irwin, Inc., 1978), p. 29.

<sup>2</sup>Tanniru Rao, "Changing Health Care Markets," Health Care Planning and Marketing 2 (October, 1981): 36.

<sup>3</sup>Malcolm T. MacEachern, Hospital Organization and Management (Chicago: Physicians' Record Company, 1957), p. 29.

<sup>4</sup>Robert M. Cunningham, "Rise in Malpractice Claims Forces Look at Previous Scare," Hospitals 55 (March 16, 1981): 85.

<sup>5</sup>John Carlova, "Will Low-Cost 'Healers' Replace M.D.'s?" Medical Economics 59 (August 9, 1982): 89.

<sup>6</sup>Larry M. Robinson and Philip D. Cooper, "Roadblocks to Hospital Marketing," Journal of Health Care Marketing 1 (Winter, 1980-1981): 18-24.

<sup>7</sup>Patrick M. Mages, "Marketing--A Hospital Management Philosophy," Hospital Management Communications 4 (March 1980): 2.

<sup>8</sup>Advertisement for Norman H. McMillan, Marketing Your Hospital A Strategy for Survival (Chicago: American Hospital Association, 1981), contained in Hospitals 55 (November 16, 1981): 92.

<sup>9</sup>Patrick M. Mages, "Ten Hospital Marketing Myths," Hospital Management Communications 4 (February 1980): 3.

<sup>10</sup>McCarthy, Basic Marketing, p. 29.

<sup>11</sup>Roberta N. Clarke, "Marketing Health Care: Problems in Implementation," Health Care Management Review 3 (Winter, 1978): 22.

<sup>12</sup>Ronald T. Fryzel, "Marketing for Nonprofit Institutions," Health and Health Services Administration 23 (Winter, 1978): 14 and Patrick J. Kiley, "Marketing Mania: A Brief Look at What The Process Is All About," Texas Hospitals 35 (March 1980): 10.

## II. DISCUSSION

### Preliminaries

During the preliminary stage the literature review was completed and interviews were conducted with managers involved in marketing in area civilian hospitals. The knowledge gained from the literature review and the interviews conducted was utilized to plan a marketing strategy for NRMC Great Lakes. The selection of a target market signaled the beginning of the utilization of a marketing strategy at NRMC Great Lakes.

### Analysis of the Market

The market analysis stage commenced with the selection of a target market. Target selection and marketing allows NRMC Great Lakes to avoid the attempt to be all things to all people as it identifies the needs of one unique group of consumers.<sup>1</sup> One group was selected as the target market from the many markets served by NRMC Great Lakes. The markets served by NRMC Great Lakes include groups traditionally thought of as consumers of

health care (dependents, patients and retired military personnel) as well as groups not usually thought of as consumers (military and contract civilian physicians; military and civilian nurses; the government employee labor union and staff hospital corpsmen to name a few). The target market selected to be studied needed to be one market easily identifiable without indepth demographic data collection. After discussion with the preceptor the Service School Command was selected as the target market.

#### Selection of the Target Market

The Service School Command (Appendix B) was selected for several reasons. The Service School Command is a major line community served by NRMC Great Lakes. The Navy Medical Department has recently undergone (and is still undergoing) many major revisions and changes. The impetus for these changes was a basic dissatisfaction of the Navy line community with the care rendered to it by the Navy Medical Department. Selection of the Service School Command as the target market for this project was an opportunity for one portion of the Navy Medical Department to become attuned to the perceived needs of one segment of the line community.

The resident had an opportunity to accompany several members of the NRMC Great Lakes Patient Affairs Service on a visit to the Service School Command during the first rotation of

her residency. The meeting had been arranged to solve some specific problems that had arisen and to increase rapport between the two entities. Although the intent of the meeting was laudable, little gain was made for neither side appeared to be willing to listen nor accept a compromise. It has been suggested that marketing may be one way for an organization to deal with such conflict.<sup>2</sup>

As one of the Navy's largest training commands, the Service School Command has many needs to be met by NRMC Great Lakes. The satisfaction or dissatisfaction of this Command may have an impact (either favorable or adverse) on the flow of resources to NRMC Great Lakes.

The Service School Command is also one market that is served by NRMC Great Lakes that is easily identifiable without indepth demographic data collection and analysis.

In the past, it has been this resident's experience that Navy medical facilities assume they know what health care the line community wants, or where that consumer's health care priorities lie. The major need is usually interpreted as the need for quality health care, that which is both acceptable and accessible, for their dependents. But, does NRMC Great Lakes really know the needs of the Service School Command?

In light of the above, the Service School Command appeared to be an ideal target market for this study.

Upon acceptance of the graduate research project proposal, formal contact was established with the Commanding Officer, Service School Command. Permission was obtained to use his Command and personnel in the study.

#### Identification of Needs

Frequently civilian health care facilities assume they understand the needs of their target market and proceed to offer services based on their assumptions. Often, after conducting some type of market needs analysis, the facility finds it has been inaccurate in understanding the true needs of the target market. Focus group interviewing is one method of determining the needs and desires of the target market thus allowing the actual needs to be compared to the assumptions of the health care facility.

To identify the needs of the Service School Command two focus group interview sessions were held with personnel from the Command. The groups were composed of school directors, regimental adjutants and company commanders of the target market. Members were selected for participation by the Commanding Officer, Service School Command. The groups contained six and seven members respectively for a total of thirteen members interviewed. This is the number at which it was thought that needs of the target market would be accurately identified, yet the manage-

ment of the intragroup dynamics would be within the capabilities of the health care resident.

The interviews were held on 8 April 1983 at a time and in a location convenient to the members of the focus groups. The resident served as moderator of each group. An unconcealed tape recorder was used to document the interviews and record the information for later analysis. Participants were instructed to discuss the needs of the Service School Command as they perceived them as members (and representatives) of that Command. They were to attempt not to be influenced by the experiences or perceptions of their families or non-target market friends.

The response of the participants varied, but all were basically enthusiastic. The guideline questions (Appendix C) were generally held in abeyance, for the interviews flowed and the groups were able to identify needs with only minor prompting and direction from the moderator.

The information gathered was later analyzed and the specific needs of the target market were identified. Upon classification of these needs into price, product, place and promotion, an audit was completed of the services currently available at NRM Great Lakes to meet those needs. The audit of services was contained to Branch Clinic 237 and did not include Building 200-H for the focus group perceived their needs to be

within the purview of Branch Clinic 237. (It should also be noted that the Service School Command is also the primary consumer of the services offered by Branch Clinic 237.)

Based upon the results of the identification and classification of needs as well as the audit of available services (Appendix D) a questionnaire was constructed.

#### Development of a Questionnaire

The questionnaire (Appendix E) developed for distribution to the target market served two purposes.<sup>3</sup> First, several questions allowed for the statistical analysis of the proportion (level) of unmet needs in the target market. (Specifically, questions 2, 4, 5, 6, 7, 8, 9, 11, 15, 17 and 18 were of this type.) Second, several questions required additional respondent input. This input would be invaluable in preparing a marketing mix to best reach the perceived needs of the target market.

#### Distributing the Questionnaire

The questionnaire was distributed to randomly selected members of the instructor and company commander portion of the staff of the Service School Command. It was determined (Appendix F) that 107 instructor members and 37 company commander members, for a total sample size of 144, were needed to accurately reflect the level of unmet needs in the target market.

To compensate for the potentially unreturned questionnaire, a total of 180 questionnaires were distributed (134 to instructors and 46 to company commanders). This would allow the sample size to be reached with up to a 25 percent non return rate.

The questionnaires were distributed to the randomly selected sample size via the Service School Command internal mail distribution system. The completed questionnaires were returned to the resident via the guard mail system.

The resident had not counted on the outstanding rate of participation of the target market population. A total of 171 questionnaires (127 from instructors and 44 from company commanders) were returned. Rather than arbitrarily discount the results of 23 questionnaires, all questionnaires (a total of 167--123 from instructors and 44 from company commanders) returned by 9 May 1983 were included in the statistical analysis.

#### Preparation for Statistical Analysis

While the ultimate purpose of a marketing strategy is to allow an organization to organize its resources to meet the perceived needs of its consumers, an organization cannot be all things to all people. The decision to mobilize resources to meet specific needs must also be compatible with the organizational goals or mission statement. Prior to the distribution of the questionnaire, the individuals involved with the management of



Branch Clinic 237 (the Officer in Charge, Branch Clinic 237 and the Regional Coordinator for Branch Clinics), met with the health care resident to set certain percentages at which they would expect the level of dissatisfaction normally to be in the target market. Dissatisfaction in the target market at a level greater than that which was set by the managers would indicate there was an unmet need in the target market.

The percentages of expected dissatisfaction determined a priori by the Branch Clinic 237 management were utilized in the binomial determination of the level of unmet needs of the target market. The percentages determined a priori, per specific question, are contained in Appendix G.

#### Development of the Marketing Mix

##### The Quantitation Stage

The basis of the marketing mix was those needs of the target market that were unmet or unsatisfied by the services currently offered by the Branch Clinic 237. To determine which of the perceived needs of the target market were unmet, the binomial test (large-scale approximation) was used. The raw scores (Appendix H) of select (quantitative) questions of the questionnaire and the a priori management determination of the acceptable level of dissatisfaction were utilized in the calculation of the binomial test. All statistical analyses were performed at the .05 level of significance. Appendix I contains

the specific computations and appropriate interpretations for each of the quantitative questions.

Out of the eleven questions tested for a level of unmet needs, it was found that Branch Clinic 237 was not meeting the needs of the Service School Command in six ways (questions 4, 5, 6, 8, 17 and 18). The current services and mix of services were found to be satisfactory but Branch Clinic 237 has some work to do in the areas of price, place and promotion in order to respond to the needs of the target market.

#### Unmet Needs of the Target Market

Price.--Service School Command perceived that they were spending too much time consuming health care for several reasons: (a) the current hours of operation of the telephone appointment system requires student to leave the classroom in order to make an appointment thereby increasing the amount of time a student must "pay" to consume health care; (b) in making an appointment via the above system the reporting place is often unclear and personnel have reported to the wrong building for the appointment; and (c) clinic hours start after most Service School Command classes begin and are over before most of the classroom hours end therefore students must lose classroom time to receive health care. (Technically, this need may also be classified as "place".)

Place.--The Service School Command perceives it is receiving inadequate or poor health care primarily due to: (a) the junior rate of the enlisted staff delivering the health care; (b) the attitude of the staff at Branch Clinic 237 toward their job and the target market. (As one respondent stated "Remind the staff that they are not doing anyone a favor by doing their job.") and (c) the lack of adherence to appropriate military grooming standards by the staff of Branch Clinic 237.

Promotion.--There is a need for reliable and consistent communication between Branch Clinic 237 and the Service School Command. Many of the target market are unaware there is an avenue via which they can voice their complaints, offer their suggestions or express their opinions. Service School Command also perceives that many of the staff of Branch Clinic 237 fail to communicate to the target market either an attitude of caring about their job or an attitude of concern regarding their patients.

A Marketing Mix--Recommendations for Branch Clinic 237

Based on the statistical determination of the level of unmet needs in the target market, the information gathered from the additional respondent input on the questionnaire and the current management philosophy at Branch Clinic 237, a marketing mix was developed. This marketing mix is included here, and has been presented to the Officer in Charge, Branch Clinic 237, the

Regional Coordinator for Branch Clinics and the Commanding Officer, NRMC Great Lakes.

The Marketing Mix--"Price" Factors

It is recommended:

1. Personnel assigned to the sick call telephone appointment system specifically state "You are to report to Branch Clinic 237 (the dispensary) for your appointment."
2. The hours of operation of the sick call appointment system telephone be changed. The Service School Command thinks the system should begin at 0600 and be expanded to 1800. If only one time adjustment can be made, the Service School Command clearly preferred for the telephone system to be activated earlier.
3. The appointment system should be modified to allow Service School Command personnel to make appointments in person rather than only via the telephone. Service School Command personnel have been turned away when attempting to make appointments in person.
4. The check in for appointment procedure must be evaluated from the eyes of the consumer. Signs should be posted and clearly visible identifying: check in desk, screening area, health record area and the room numbers for appropriate practitioners.

5. The Service School Command perceives a need for appointments during the evening hours. There was a tie in preference between extending the appointments to 1800 and extending them to 2000. The level of dissatisfaction with the current evening hours (there are no evening hours) was a level at which management agreed to evaluate internal resources. To meet this need it is recommended that the Branch clinic 237 consider:

a. A staggered shift corpsman (possibly 1000 to 1800 or 1200 to 2000) in addition to the duty corpsman. The addition of this corpsman would allow for the scheduling of some evening appointments. This corpsman should have a limited scope of practice as well as the training offered by the clinical screeners program.

b. The arrival of work (the queuing theory) for the pharmacy, lab and x-ray sections of the clinic be studied. For example, if the personnel manning these sections arrive at 0700 yet workload is not generated until later they too may be able to stagger their work hours. This may provide for some early evening coverage without requiring an extended work day or additional personnel.

The Marketing Mix--"Place" Factors

It is recommended:

1. Personnel inspections be conducted daily at morning quarters for Branch Clinic 237 personnel to ensure compliance with Navy regulations for grooming and uniforms.

2. Staff personnel address patients and each other by their appropriate military title and avoid using first names inappropriately.

3. Patient contact point management should be reviewed and implemented by Branch Clinic 237 staff.

4. Health care personnel be admonished to avoid giving counseling outside their field of expertise, e.g., "the best way to beat an enlisted rap..."

#### The Marketing Mix--Promotion Factors

It is recommended:

1. Branch Clinic 237 personnel conduct orientation sessions for new staff personnel reporting to Service School Command. This may be done at Branch Clinic 237 or by participation in the Service School Command orientation program. This would provide a reliable and consistent means of communication to the personnel of that Command.

2. The name, office number and telephone extension of the patient contact representative for Branch Clinic 237 be clearly posted at all entrances and exits to the clinic. In addition, the information should be submitted periodically to the Service School Command for inclusion in the Plan of the Day.

3. An informal communication network be established by the Master Chief of Branch Clinic 237 and the Service School Command by his participation in the Chief Petty Officer meetings at the Service School Command. This would be one way to educate the target market about the assignment of personnel in the medical department, thereby correcting the perception that junior enlisted personnel in the medical department are similar to junior nonrated personnel in the line, e.g., not to be in positions of responsibility.

4. The Officer in Charge of Branch Clinic 237 make routine calls on the Commander of each of the three Service School Command regiments. This would keep her up-to-date with changes in the Service School Command as they happen rather than waiting for problems to occur because of those changes. It would also allow those school commanders a "familiar face" with whom to talk at the clinic, should the need arise.

With the implementation of the above marketing mix, Branch Clinic 237 will be organizing its resources to better meet the needs and perceived needs of the target market, the Service School Command.

## FOOTNOTES

<sup>1</sup>Stephen B. Tucker, "Marketing Research Tools for Hospital Management," Texas Hospitals 35 (March, 1980): 21.

<sup>2</sup>Clarke, "Marketing Health Care: Problems in Implementation," p. 25.

<sup>3</sup>George Miaoulis, "After the Marketing Audit," Profiles in Hospital Marketing 3 (3rd Quarter, 1981): 82.



### III. CONCLUSION

#### Answering the Applied Research Question

Through the development and implementation of a marketing strategy at Naval Regional Medical Center Great Lakes, the applied research question has been answered: Civilian marketing practices and principles are applicable to the military health care setting. Civilian marketing practices were utilized to develop and implement this marketing strategy. It was found there were several areas of need in the target market that were not being satisfied by NRMC Great Lakes in spite of the fact that NRMC Great Lakes perceived it was doing a good job. The recommendations presented in the marketing mix will allow Branch Clinic 237 to better meet the needs of the Service School Command.

There is one major exception to this affirmative answer to the applied research question. Many civilian facilities, both health care and general business firms, find it best to develop a marketing department. This department then coordinates all marketing functions within that firm. As the firm achieves the ultimate 'consumer is king' philosophy, this department is the driving force of the organization. This is not in keeping with the current structure or philosophy of the military health care system. Therefore, given the initial criteria of this project, this specific marketing practice is not applicable to the military health care system. Further discussion of the

widespread applicability to the military health care system will be addressed after the summary of the steps of a marketing strategy.

#### Summary of the Steps of a Marketing Strategy

As the literature review and the state-of-the-art marketing interviews have demonstrated, there is no one format, no one best way for utilizing marketing in the health care setting. The basic steps of a marketing strategy may be presented as a series of questions to be utilized by any manager. Progressively answering this set of questions will enable a manager to develop a basic marketing strategy at his facility.

The questions to be answered are:

1. Who are we and what are our goals?
2. What do we currently have to offer?
3. Who are our consumers?
4. What do our customers want? What do they think they need? Do they perceive their needs are being met? Which needs do they perceive as unmet?
5. Which of our consumers needs are most important to us? How can we reorganize our resources to meet the needs of our consumers?

#### Applicability to the Military Health Care System

From the experience gained through the completion of this project, it is concluded that marketing is not only

applicable to the military health care system, but this system may greatly benefit from the adoption of these principles. The widespread applicability of marketing to the military health care system, as well as some of the barriers that may be encountered in applying marketing practices to the military health care system, are addressed in the answers to several pertinent questions.

Who are we and what are our goals? Military medical facilities basically have their mission and organizational goals set for them by higher authorities. Yet anyone who has been in more than one military medical facility is aware that each has its own personality, its own prioritization of needs with the overall mission statement and its own particular consumer mix. Marketing, at the local level, will allow each facility, large or small, to relate to its particular consumer mix and complete its mission in an effective manner.

Who are our consumers? Title X of the U.S. Code specifies most of the consumers of military health care, yet it does not address the differences in consumer mix faced by each facility. The population served by Naval Hospital Bethesda is much different than that served by the Branch Clinic, Key West, Florida. In spite of the difference there is one major similarity. Our consumers are becoming more informed as are their counterparts in the civilian community. As mentioned in

the introduction, the satisfaction of military health care consumers is important to the military medical system. Marketing will attune each military medical facility to its unique consumers.

Which of our consumers needs are most important to us? How can we reorganize our resources to meet the needs of the consumers? Even within the general mission statement, military medical facilities cannot be all things to all people. This is understandable to most people, except for those who perceive their needs are not being met or that services they have previously used are being curtailed. Military medical facilities may decrease problems or resentment in this area via "promotion," e.g., communication to their markets! This will also counter the trap in which many military medical facilities fall: this is free health care, the people should be happy with what they can get.

If the military uses marketing, won't it actually be selling the services? Won't this increase the workload and demand upon our limited resources? By identifying and responding to consumers needs, the military medical system will not only be helping the consumer, but will also be helping themselves to use their resources efficiently. For example, why do military facilities hold clinics primarily from 0800 to 1630? (Not to mention closing for lunch!) What happens to working personnel or

the single parent? They must sacrifice their work day or they may use the emergency room for primary care purposes. If we are aware of how and why the consumers will use our facilities, military medical facilities may be more efficient in the delivery of health care. Wouldn't the adoption of marketing be a costly maneuver for a military health care facility? If a marketing structure were developed and imposed upon the existing structure of a health care facility it would be costly, but most military health care facilities are already performing many marketing functions:

(a) Market Identification - The DEERS system, CHAMPUS statistics, and morbidity and mortality reports, are several ways, currently in place, that will aid a facility in collecting demographic data about its markets.

(b) Identification of Needs - Consumer councils, patient satisfaction surveys, the quality assurance program (especially the patient contact program functions) are existing means by which facilities may put their fingers on the pulse of their consumers. The statistical analysis of questionnaires need not be complex calculations. Simple yes/no questions on questionnaires delivered to consumers, are valuable and easily used by most personnel currently at military medical facilities.

(c) Promotion - Many military medical facilities have a public affairs office, or a person tasked with the public affairs

function. This may be the basis of the promotion portion of a marketing strategy. We are already communicating to our publics. This communication usually includes how and why to use the facility, tips for health care in the current season and so forth. This avenue may also be used to teach consumers to make more educated decisions about their health care needs.

So, if military medical facilities are already involved in the above activities, what's the point of marketing? There are two main areas that will be discussed in relation to this question. First, although many military health care facilities have these programs in place, but they still basically assume they know what the consumer wants and needs. This is a dangerous fallacy which can only harm the military medical system in the long run. Second, many of the above functions occur independently and without a feedback mechanism into the overall planning function of the facility. A military health care facility does not necessarily need a marketing director or department, but it does need coordination of results of these functions and the ability to channel them into the planning functions of the hospital.

There is yet another indication that marketing is applicable to the military medical facility. The target market of this study, the Service School Command, responded overwhelmingly to this study. The personnel involved were very willing to share their needs, both met and unmet, with the

resident. It was also interesting to note that when given this opportunity, the Service School Command did not "ask for the moon," but really evaluated their actual needs. Although this may be an isolated incident or a unique response from a target market only further use of marketing practices will lend support or disprove the conclusion that the consumers of military medical care are ready to be the recipients of health care marketing.

The use of marketing at the military health care facility will ultimately contribute to the longevity of the military medical health care system.

APPENDIX A



## DEFINITIONS

A market is the "set of all people who have an actual or potential interest in a product or service and the ability to pay."<sup>1</sup>

Marketing is the "analysis, planning, implementation and control of carefully formulated programs designed to bring about voluntary exchanges of values with target markets for the purpose of achieving organizational objectives."<sup>2</sup>

Marketing strategy is the "selection of a target market and the development of an effective marketing mix to reach and serve the chosen customers."<sup>3</sup>

Marketing mix is "the particular blend of the controllable marketing variables (the Four P's) that the firm uses to achieve the objectives in the target market. The key to understanding and applying the marketing mix is "the concept of rightness--the right product in the right place at the right time with the right promotion."<sup>4</sup>

The Four P's are the major ingredients (controllable variables) of the marketing mix. They are: price (monetary or non-monetary the consumer must pay to consume the product);

product (the services or combination of services offered); place (where, when and by whom goods and services are offered); and promotion (communication to the target market--promotion is not solely selling!)."<sup>5</sup>

Target Marketing is a "style of marketing where the organization distinguishes between different segments making up the market, chooses one or more of these segments to focus on, and develops market offers and marketing mixes tailored to meet the needs of each target market."<sup>6</sup>

## FOOTNOTES

<sup>1</sup> Philip Kotler, Marketing for Non-profit Organizations, 2nd Edition. (Englewood Cliffs: Prentice Hall, Inc., 1982), p. 103.

<sup>2</sup> Ibid., p. 6.

<sup>3</sup> Ibid., p. 103.

<sup>4</sup> Ibid., p. 108 and Richard C. Ireland, "Using Marketing Strategies to Put Hospitals on Target," Hospitals 51 (June 1, 1977); p. 56.

<sup>5</sup> E. Jerome McCarthy. Basic Marketing, 6th Edition. (Homewood: Richard D. Irwin, Inc., 1978), pp. 40-41, and Ireland, p. 56.

<sup>6</sup> Kotler, p. 216.

APPENDIX B

"TRAINING PRECEDES VICTORY"

Service School Command  
Naval Training Center  
Great Lakes, Illinois

Mission Statement

To provide training for officer and enlisted personnel in order to prepare them for early usefulness afloat in their designated specialties and to supplement training afloat by providing personnel advanced and/or specialized training when such can be more advantageously given ashore. To serve as an effective instrument of United States foreign policy by initiating and continuing action programs which promote positive relations between the Command and foreign nationals and which assist individual naval personnel and their families to work effectively, live with dignity and satisfaction, and function as positive representatives of the Navy and the United States while overseas.

The Service School Command is one of several technical training commands in the U.S. Navy. To meet the above mission the Service School Command staff of 1,545 officer and enlisted personnel teach over 180 courses in 22 different schools. The staff is comprised of 930 instructors, 51 Company Commanders, nine School Directors, three Regimental Adjutants and approximately 550 administrative and support personnel. This staff trains 23,000 students per year with approximately 8,200 students on board at any one time.

The courses range from four to 52 weeks in length, and the curriculums offered encompass a wide variety of technical skills from basic engineering and electronics to highly advanced weapon system and nuclear power training. (Basic schools are usually known as "A" schools, while the advanced specialty schools are known as "C" schools.)

There are two main methods of teaching at Service School Command. The first is the traditional "podium" type instruction. The second is a "lock step" type of program where a student moves through a programmed instruction, with the assistance of a computer, counselor and technical labs. This is not to be confused with a self-paced type program, for students must progress, with satisfactory grades, according to a stringent time schedule. If a student fails to make the expected grades, or misses a certain amount of time (usually only two hours), he is "rolled back," e.g., must repeat the entire course. This is most prevalent in the shorter, more basic "A" schools.<sup>2</sup> To accomplish this massive training goal much of the Service School Command operates on a three shift round-the-clock schedule. This potential interruption of a student's circadian rhythm compounds the emphasis on "making the grade" to contribute to a highly stressful experience for the young men and women attending Service School Command.

Students attending Service School Command are

commonly referred to, by Service School Command Staff, as "in the pipeline." The cost associated with maintaining a student in the pipeline is approximately \$640.00 per day. Thus, when students are held up or rolled back for any reason, they are costing the Service School Command a great deal of money. For example, during the time period 1 October 1982 to 31 March 1983, 1,782 students (8% of the student population) were rolled back. Half of the roll backs were due to academic reasons, the other half to non-academic reasons including medical.<sup>3</sup> Further breakdown of this figure was unavailable. Unfortunately for Service School Command, students in a "non-student" status, e.g., awaiting the convening of a new class if they are being rolled back, on limited or light duty due to a temporary medical problem, continue to be counted on the Service School Command student census, thereby potentially clogging the student pipeline for some incoming students and wasting valuable training dollars. Therefore, the smooth movement of the students through the pipeline is of utmost importance to the successful completion of the training mission.

## FOOTNOTES

<sup>1</sup>Welcome aboard information package, Service School Command, Naval Training Center, Great Lakes, Illinois. August, 1981.

<sup>2</sup>Interview with CWO3 Neil Moore, Student Accounting, Management and Control Officer, Service School Command, Naval Training Center, Great Lakes. Multiple personal and telephone interviews.

<sup>3</sup>Interview with ENS Smith, USN, Student Control Officer, Service School Command, 5 April 1982.



APPENDIX C

GUIDELINES FOR INITIAL SURVEY  
(FOCUS GROUP SURVEY)

The purpose of conducting focus group surveys is to receive candid data from a certain group of people without influencing them with the interviewer's questions. The following is a list of questions that will be utilized to spark communication should the focus group become bogged down in one area or suddenly shy.

1. Do students use sick call during school hours or in their off duty hours?
2. What is the procedure for going to sick call?
3. How do students travel to sick call?
4. How are students accounted for while they are at sick call?
5. Are students required to make the time up that they miss from class due to sick call?
6. What happens to a student's class standing if he is hospitalized?
7. What do you think of the health care services offered by NRMC Great Lakes? If you feel it should be improved, what are your suggestions?
8. Have you or your students used any non-military health care facilities in the area? Why? Did they satisfy you more than the NRMC?
9. Are there any services currently not offered by NRMC Great Lakes that you think the Service School Command would benefit from?
10. How often do you purchase medicines from a non-military store rather than go to sick call? For example, cough medicine for a cold?

11. Are there any special ways the NRMC Great Lakes helps to return instructors to their classes in a minimum of time?
12. Where do you go to sick call? Where do the students routinely go to sick call?
13. How do you get information concerning any changes in services, etc., at NRMC Great Lakes?
14. Do you have a personal contact on the staff at NRMC Great Lakes?
15. How are you treated by the staff at NRMC Great Lakes? Do they care about you?

APPENDIX D

## CLASSIFICATION OF NEEDS

The information obtained in the focus group interviews was analyzed to determine the needs of the target market. The needs were classified into: price, product, place and promotion. Based on these needs, an audit was conducted at Branch Clinic 237 of the services currently available for satisfying those needs. What follows is a brief summary of the result of the classification of the identified needs as well as result of the audit of available services.

Price.--The primary price the Service School Command must pay to utilize the health care services at Branch Clinic 237 is time. Specifically, time lost from the classroom. As mentioned in Appendix B, a setback may occur for a student if a certain amount of time (as little as two hours) of classroom time is missed.

Branch Clinic 237, in the fall of 1982, attempted to decrease the time a Service School Command member spent consuming health care services. Prior to this time, sick call was conducted commencing once in the morning and once in the afternoon. If a service member felt he needed to be seen, he reported to one of the scheduled sick calls and waited until he was seen. In the fall of 1982, an appointment system was instituted at Branch Clinic 237. A Service School Command member could call for a specific appointment time thereby theoretically decreasing the time he wasted waiting to be seen. The telephone

for the scheduling of appointments is answered from 0715 to 1600. Appointments are made for 0715 to 1530 daily. An appointment may be scheduled for the same day as the call, the next day or two days hence.

The target market perceived it was paying a second price for health care services. It is important to the target market that the health care be delivered in a competent yet military manner, e.g., there is a need for the Service School Command member to be treated (of course) as a patient, yet to be able to maintain his dignity as a military member. The Service School Command felt it was forced to pay for health care with a sacrifice of their military dignity, e.g., a senior enlisted man being addressed by his first name by a very junior enlisted staff member.

Currently, there is no specific service to meet the second perceived price need, e.g., health care with dignity.

Product.--The services available at Branch Clinic 237 (e.g., primary care, military sick call, immunization clinic and health record maintenance) appeared to be what the focus group outlined as needed for their population. There was, however, one exception. It was mentioned that there was a need for obstetrical and gynecological services at the clinic. There are currently eight female staff members (out of a total staff of 1,545) and 202 female students (out of a total student population of 8,200) on board. If these females need OB-GYN services, they

must make an appointment at the main hospital. There are currently no OB-GYN specialists assigned to Branch Clinic 237 on any basis.

Place.--The "place" in the marketing mix refers not only to the physical location of the services provided, but when and by whom the services are provided. The focus group identified several needs in this area. The audit of services available follows the statement of each need.

1. The Service School Command needs health care services that are readily accessible in both location and hours of operation. Branch Clinic 237 is located in proximity (anywhere from two to ten blocks depending upon to which building of the Service School one refers). Branch Clinic 237 offers services from 0715 to 1630, Monday through Friday. There is a corpstaff member on duty after hours and on the weekends. Their primary duty after hours is to dispense health records if a Service School Command member needs treatment (the Service School Command member then proceeds to the emergency room at the main hospital to be treated). At times this corpsman will treat minor illnesses rather than sending the patient to the hospital. Pharmacy, x-ray and laboratory services are not available in Branch Clinic 237 to support this treatment during off-duty hours.

2. Health care, in Branch Clinic 237, is delivered by one military physician (a general medical officer), several

military physicians' assistants, military independent duty trained corpstaff and many junior corps personnel with only the basic Hospital Corps School training and two to four months of actual experience. This staffing with junior personnel is very different from that which is found in a typical fleet command where the philosophy is that very junior enlisted are not responsible or trained well enough to assume any major responsibility, especially for someone's health. The Service School Command wants to have reliable, consistent, quality care delivered to them.

3. The Service School Command requires its members to adhere to all Navy regulations on grooming and uniform standards and military bearing. It expects the same strict adherence to be maintained by the deliverers of its health care. Direct on-site observation at Branch Clinic 237 demonstrated that grooming standards and military bearing appeared to be a bit lax.

Promotion.--The Service School Command feels the need for a channel of communication to Branch Clinic 237. It perceives there is currently no such channel for disseminating information. Branch Clinic 237 maintains it has the appropriate channels of communication to the Service School Command. There did not appear to be any type of informal communication between the two areas.



APPENDIX E

April 1983

Service School Command Member:

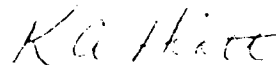
This is a questionnaire to determine the level of satisfaction of Service School Command with the health care delivered by the Naval Regional Medical Center Great Lakes and Branch Clinic 237. The information obtained from this questionnaire will help us to better plan and manage our services and help us become more responsive to your needs and observations.

Permission for you to answer this questionnaire has been obtained from Commander Aydt, Commanding Officer (Acting), Service School Command.

This questionnaire is about the Service School Command, so please answer the questions as a representative of that Command and try not to answer them based on the experiences of your family at NRMCC Great Lakes.

Thank you for taking the time to complete this questionnaire. Please feel assured that your response is a most valued part of this survey. No personal identification is required as this is an anonymous survey.

Respectfully,



K. A. Hiatt  
LCDR, NC, USN

Please circle the letter corresponding to your chosen answer and add your recommendations where necessary.

1. What has been your level of interaction with Branch Clinic 237 over the past year?
  - a. I have been seen as a patient
  - b. I have had students who have been seen as patients
  - c. I have both been seen as a patient and have had students who have been seen as patients
  - d. I have had no contact with Branch Clinic 237
  
2. Are you aware there is a sick call appointment system at Branch Clinic 237?
  - a. Yes
  - b. No
  
3. If you answered Yes to question 2, have you ever used the system or recommended any of your students use the system? (Skip if you answered No above)
  - a. Yes
  - b. No
  
4. If you answered Yes to question 2, have you or your students reported to the wrong place because the appointment system personnel did not clearly identify where you were to report for your appointment? (Skip if you answered No above)
  - a. Yes
  - b. No
  
5. The appointment system telephone is answered from 0715 to 1600. Are these hours appropriate for Service School Command?
  - a. Yes
  - b. No. I think the hours the appointment system telephone is answered should be changed to \_\_\_\_\_ to \_\_\_\_\_
  
6. When you report for an appointment at Branch Clinic 237 is the check in procedure easily understood by you or your students?
  - a. Yes
  - b. No

7. Are the personnel at Branch Clinic 237 cooperative in signing student "walking chits" for the student's return to class?
- Yes, they send students back with a dated and timed chit
  - No, they do not send students back with a dated and timed chit
8. Is there a need to have evening appointments at Branch Clinic 237?
- Yes, evening appointments should be offered until the hour of \_\_\_\_\_
  - No, evening appointments are not necessary
9. Is there a need for Branch Clinic 237 to open earlier in the day to see patients?
- Yes, the Clinic should begin seeing patients at \_\_\_\_\_
  - No, early morning appointments are not necessary
10. If additional hours were available at Branch Clinic 237, I would most frequently utilize (or encourage my students to utilize):
- Early morning appointments (0500 to 0630, for example)
  - Evening appointments (1630 to 1900, for example)
  - I would continue to use the current hours of operation
11. Are you satisfied with the variety of services offered by Branch Clinic 237?
- Yes
  - No, I would like to see the following services added to or deleted from the available services at Branch Clinic 237:
12. Answer this question only if you have female students in your class or company, or if you are female. Which of the following services would you use if they were available at Branch Clinic 237?
- Routine gynecological exams (pap smears, for example)
  - Routine gynecological counseling (birth control, for example)
  - Obstetrical services
  - I would prefer to use these services at the main hospital

13. In the performance of your Service School Command duties, have you used or called for an ambulance or emergency service (medical) within the past year?

- a. Yes
- b. No

14. If you answered yes in question 13, where did you call for the ambulance?  
If you answered no in question 13, where would you call for the ambulance?

- a. Branch Clinic 237
- b. Emergency Room at the main hospital (HRMC Building 200-H)

15. If you answered yes in question 13, were you satisfied with the responsiveness and professionalism of the ambulance and crew? (Skip if you answered No in question 13)

- a. Yes, I was satisfied
- b. No, I was not satisfied because: (Please comment)

16. Does the attitude of the staff at Branch Clinic 237 affect your opinion of the quality of health care services delivered at Branch Clinic 237?

- a. Yes
- b. No

17. Which statement best describes the way you feel about the health care delivered at Branch Clinic 237?

- a. The health care is excellent and the staff is very professional
- b. The health care is adequate and the staff is very professional
- c. The health care is excellent but the staff is at times lax and seems uncaring or unprofessional
- d. The health care is adequate but the staff is at times lax and seems uncaring or unprofessional
- e. I do not agree with any of the above. My opinion is that:  
(Please comment)

66

18. Are you aware that if you have a complaint, suggestion or question concerning your care or the care of one of your students, that there is an individual or office to go to or call for help or resolution of the problem?

- a. Yes
- b. No

19. What is your usual source of information about new policies or services at Branch Clinic 237?

- a. Official channels (Memo, Plan of the Day, for example)
- b. A friend that works at Branch Clinic 237
- c. The "Great Lakes Bulletin" weekly newspaper
- d. I do not have a source of information, and usually find out about changes when I try to interact with Branch Clinic 237
- e. Other: (Please explain)

20. Please indicate any other suggestions, comments or recommendations that may help Branch Clinic 237 better treat your health care needs.

APPENDIX F

### SAMPLE SIZE DETERMINATION

The sample size to be surveyed was determined by utilization of the method of sample size determination for estimating a population proportion found in Daniel with correction for a finite population.<sup>1</sup>

The formula utilized was:

$$n = \frac{Nz^2pq}{d^2(N-1) + z^2pq}$$

Where:

n = sample size to be determined

N = total population

Z = level of confidence

p = estimated population proportion with the desired characteristic (satisfied or unsatisfied)

q = 1 - p

d = amount of variation around Z

Two groups of Service School Command staff personnel were recommended for sampling by Commanding Officer, Service School Command. These groups were: instructors (a total of 930 personnel) and company commanders (a total of 51 personnel). The true proportion of needs that were met versus unmet in the population was unknown, therefore p was estimated as .5. A 90 percent confidence interval with d = .075 was desired by the resident.



Application:

$$n = \frac{930 (1.645)^2 (.5) (.5)}{(.075)^2 (929) + (1.645)^2 (.5) (.5)}$$

$$n = \frac{629.1508}{5.9021}$$

n = 107 instructors to be sampled

where: n = number of instructors to be sampled

N = 930

Z = 1.645 (corresponding to a 90 percent confidence interval)

p = .5

q = .5

d = .075

Application:

$$n = \frac{51 (1.645)^2 (.5) (.5)}{(.075)^2 (50) + (1.645)^2 (.5) (.5)}$$

$$n = \frac{34.5015}{.9578}$$

n = 37 company commanders to be sampled

where: n = number of company commanders to be sampled

N = 51

## FOOTNOTE

<sup>1</sup>Wayne W. Daniel, Biostatistics: A Foundation for Analysis in the Health Sciences, 2nd ed. (New York: John Wiley & Sons, 1978), pp. 145 and 146.

APPENDIX G

### A PRIORI MANAGEMENT PHILOSOPHY

The questionnaire distributed to the target market was composed of two types of questions. The purpose of the first type of question was to determine the level at which the needs of the target population were met or unmet (satisfied or dissatisfied). The purpose of the second type of question was to gather information from the target market which may be valuable to the managers in planning and evaluating services for the purpose of better meeting the needs of the target population.

Prior to the distribution of the questionnaire the management of Branch Clinic 237 set maximum levels of "acceptable dissatisfaction." In other words, the level of dissatisfaction they would expect to find in the population surveyed. If the level of dissatisfaction in the target market is greater than what was expected as standard, the management of the Branch Clinic would classify those needs (of the target market) as unmet by current services available.

What follows are the standard levels of dissatisfaction, by appropriate question number, expected by Branch Clinic 237. If a question is not included here, it is because it was of the general data gathering type and will not be used to determine level of unmet needs.

Question #2. Are you aware there is a  
sick call appointment system at Branch Clinic  
237?

It is acceptable to management if up to five percent of the target market is unaware.

Question #4. If you answered yes to question #2, have you or your students reported to the wrong place because the appointment system personnel did not clearly identify where you were to report for your appointment?

It is acceptable to management that ten percent or less of the target market would have reported to the wrong place.

Question #5. The appointment system telephone is answered from 0715 to 1600. Are these hours appropriate for Service School Command?

Management will accept that 30 percent or less of the target market is dissatisfied. If greater than 30 percent is dissatisfied, current operations will be scrutinized to attempt to increase satisfaction. If greater than 75 percent of the target market is dissatisfied, alternatives will be developed and evaluated based on information gathered in response 5b (I think the hours the appointment system telephone is answered should be changed to \_\_\_\_ to \_\_\_\_).

Question #6. When you report for an appointment at Branch Clinic 237, is the check in procedure easily understood by you or your students?

A dissatisfaction in the target market of ten percent or less is acceptable to the management.

Question #7. Are the personnel at Branch Clinic 237 cooperative in signing student "walking chits" for the student's return to class?

It is acceptable to management that 20 percent or less of the target market is dissatisfied.

Question #8. Is there a need to have evening appointments at Branch Clinic 237?

Question #9. Is there a need for Branch Clinic 237 to open earlier in the day to see patients?

Management will accept up to a 40 percent dissatisfaction with current hours. If greater than 40 percent of the target market feels the need for either morning or evening appointments the management of Branch Clinic 237 will evaluate internal resources and alternatives based on information gathered in these questions.

If greater than 80 percent of the target market is dissatisfied with the hours of operation, the management will mobilize resources external to the Branch Clinic to develop alternatives. (As Branch Clinic 237 is only one portion of the larger system of health care, the Naval Regional Medical Center.)

It is to be noted that any or all changes in the hours of operation of Branch Clinic 237 must be approved by the Commanding Officer, Naval Regional Medical Center, Great Lakes.

Question #11. Are you satisfied with the variety of services offered by Branch Clinic 237?

It is acceptable to management if 20 percent or less of the target market are dissatisfied.

Question #15. Were you satisfied with the responsiveness and professionalism of the ambulance and crew?

It is acceptable to management if 20 percent or less of the target market is dissatisfied.

Question #17. Which statement best describes the way you feel about the health care delivered at Branch Clinic 237?

- a. The health care is excellent and the staff is very professional.
  - b. The health care is adequate and the staff is very professional.
  - c. The health care is excellent but the staff is at times lax and seems uncaring or unprofessional.
  - d. The health care is adequate but the staff is at times lax and seems uncaring or unprofessional.
  - e. I do not agree with any of the above.
- My opinion is that: (please comment).

A one percent or less level of dissatisfaction (indicated by a response of "b", "c", or "d") is acceptable to management.

Question #18. Are you aware that if you have a complaint, suggestion or question concerning your care or the care of one of your students, that there is an individual or office to go to or call for help or resolution of the problem?

It is acceptable to management if five percent or less of the target market is unaware of the complaint/suggestion mechanism.

APPENDIX H



### RESULTS OF THE QUESTIONNAIRE

The raw data, or actual number of specific responses to each question, is summarized in Table 1. This data is utilized in the binomial determination of proportion of unmet needs in the target market (Appendix I).

TABLE I

Results, By Question, of Target Market Questionnaire

Question	Total Responding	Response A	Response B	Response C	Response D	Response E	No Response
1	167	31	19	109	8	*	0
2	167	164	3	*	*	*	0
3	164 (a)	156	8	*	*	*	0
4	156 (a)	30	126	*	*	*	0
5	167	86	77	*	*	*	4
6	167	131	28	*	*	*	8
7	167	86	29	*	*	*	52
8	167	103	55	*	*	*	9
9	167	67	89	*	*	*	11
10	167	48	63	50	*	*	6
11	167	140	17	*	*	*	10
12	167	24	0	0	6	*	137
13	167	83	83	*	*	*	1
14	167	32	85	*	*	*	50
15	83 (a)	66	14	*	*	*	3
16	167	127	30	*	*	*	10
17	167	18	45	37	14	*	16
18	167	106	56	*	*	*	5
19	167	112	4	4	43	2	2

Notes: (a) total responding depended on a "yes" response in a previous answer

\* indicates this response was not available for this question

APPENDIX I

DETERMINATION OF THE PROPORTION OF  
UNMET NEEDS IN THE TARGET MARKET

Background

To determine the proportion of the Service School Command perceiving a need is unmet the binomial test (large-sample approximation) was used. For each question (of the non information gathering type) a null hypothesis was developed using the percentage of dissatisfaction (indicated by "j" below) determined as acceptable by the management of Branch Clinic 237. The null hypothesis for each question is in the form:

$$H_0: p \leq j$$

and is read "The null hypothesis is the level of dissatisfaction is less than or equal to "j" (thus indicating the need is met).

The alternative hypothesis for each question is in the form:

$$H_A: p > j$$

and is read "The alternative hypothesis is that the dissatisfaction is greater than "j" (thus indicating the need may be unmet).

An acceptance of the null hypothesis (the null hypothesis is not rejected) indicates that the null hypothesis may be true, e.g., that the level of dissatisfaction is less than or equal to "j". A rejection of the null hypothesis (an acceptance of the alternative hypothesis) indicates the null hypothesis is not supported by the available data, e.g., the level of dissatisfaction is greater than "j".<sup>1</sup>

The decision to accept or reject the null hypothesis will be made based on the critical value obtained using the formula for the binomial test (large-sample approximation) and the questionnaire results (Appendix G).

Each question was evaluated at the .05 level of significance.

The formula for the binomial test (large-sample approximation) is:<sup>2</sup>

$$s = np_0 + z\sqrt{np_0(1-p_0)}$$

where:

- s = critical value of the characteristic of interest (in this case dissatisfaction)
- n = sample size (this will change only in questions 4 and 15 due to the nature of the question)
- p = proportion accepted by Branch Clinic 237 managerial philosophy
- z = standard normal variation associated with a certain level of significance (in this case 1.645 is the z-value associated with a .05 level of significance)

#### Application

##### Question 2

Management accepts up to and including 5 percent of the

target market as unaware (or dissatisfied). If three out of 167 respondents were dissatisfied (or unaware) is this greater than 5 percent?

$$H_0: p \leq .05$$

$$s = 167(.05) + 1.645\sqrt{167(.05)(.95)}$$

$$H_A: p > .05$$

$$s = 12.98$$

As three is less than 12.98, the null hypothesis is not rejected. Data supports that less than 5 percent of the population is dissatisfied (or unaware) of the sick call appointment system.

#### Question 4

Management accepts up to and including 10 percent of the target market to misunderstand where to report for appointments (dissatisfied). If 30 out of 156 respondents are dissatisfied, is this greater than 10 percent?

$$H_0: p \leq .1$$

$$s = 156(.1) + 1.645\sqrt{156(.1)(.9)}$$

$$H_A: p > .1$$

$$s = 21.76$$

As 30 is greater than 21.76 the null hypothesis is rejected. Data supports that greater than 10 percent may be dissatisfied (misunderstand where to report).

Question 5

Management accepts up to and including 30 percent of the target market to be dissatisfied with the current hours of operation of the appointment system telephone. If 77 out of 167 respondents are dissatisfied (a) is this greater than 30 percent? (b) is this greater than 75 percent?

$$\begin{aligned} \text{(a)} \quad H_0: p &\leq .3 & s &= 167(.3) + 1.645\sqrt{167(.3)(.7)} \\ H_A: p &\Delta .3 & s &= 59.84 \end{aligned}$$

As 77 is greater than 59.84, the null hypothesis is rejected. Data supports that greater than 30 percent of the target market may be dissatisfied with the current hours of operation of the appointment system telephone.

$$\begin{aligned} \text{(b)} \quad H_0: p &\leq .75 & s &= 167(.75) + 1.645\sqrt{(.75)(.25)(167)} \\ H_A: p &\Delta .75 & s &= 134.46 \end{aligned}$$

As 77 is less than 134.46 the null hypothesis is not rejected. Data supports the proportion of dissatisfaction may be less than 75 percent.

Question 6

Management accepts up to and including 10 percent of the target market to be dissatisfied with (or confused about) the current check-in for appointment system. If 28 out of 167 respondents are dissatisfied, is this greater than 10 percent?

$$H_0: p \leq .1$$

$$s = 167(.1) + 1.645\sqrt{167(.1)(.9)}$$

$$H_A: p > .1$$

$$s = 23.08$$

As 28 is greater than 23.08, the null hypothesis is rejected. Data supports that greater than 10 percent of the target market may be dissatisfied or confused about the check-in for appointment system.

#### Question 7

Management expects up to and including 20 percent of the target market to be dissatisfied with the current "walking chit" policy. If 29 out of 167 respondents are dissatisfied, is this greater than 20 percent?

$$H_0: p \leq .2$$

$$s = 167(.2) + 1.645\sqrt{167(.2)(.8)}$$

$$H_A: p > .2$$

$$s = 41.90$$

As 29 is less than 41.90, the null hypothesis is not rejected. Data supports that less than 20 percent of the target market may be dissatisfied with the current "walking chit" system.

#### Question 8

Management accepts up to and including 40 percent of the target market to be dissatisfied with the current evening hours



(e.g., no evening hours). If 103 out of 167 respondents are dissatisfied (a) is this greater than 40 percent? (b) is this greater than 80 percent?

$$\begin{array}{ll} \text{(a)} & H_0: p \leq .4 & s = 167(.4) + 1.645\sqrt{167(.4)(.6)} \\ & H_A: p > .4 & s = 77.21 \end{array}$$

As 103 is greater than 77.21, the null hypothesis is rejected. Data supports that greater than 40 percent of the target market may be dissatisfied with current evening hours.

$$\begin{array}{ll} \text{(b)} & H_0: p \leq .8 & s = 167(.8) + 1.645\sqrt{167(.8)(.2)} \\ & H_A: p > .8 & s = 142.10 \end{array}$$

As 103 is less than 142.10, the null hypothesis is not rejected. Data supports that less than 80 percent of the target market may be dissatisfied with the current evening schedule.

### Question 9

Management accepts up to and including 40 percent of the target market to be dissatisfied with the current early morning hours (e.g., no early morning hours). If 67 out of 167 respondents are dissatisfied (a) is this greater than 40 percent? (b) is this greater than 80?

$$\begin{array}{ll} \text{(a)} & H_0: p \leq .4 & s = 167(.4) + 1.645\sqrt{167(.4)(.6)} \\ & H_A: p > .4 & s = 77.21 \end{array}$$

As 67 is less than 77.21, the null hypothesis is not rejected. The data supports that less than 40 percent of the target market may be dissatisfied with current early morning hours.

$$(b) \quad \begin{array}{ll} H_0: p \leq .8 & s = 167(.8) + 1.645\sqrt{167(.8)(.2)} \\ H_A: p > .8 & s = 142.10 \end{array}$$

As 67 is less than 142,10, the null hypothesis is not rejected. The data supports that less than 40 percent of the target market may be dissatisfied with current early morning hours.

#### Question 11

Management accepts up to and including 20 percent of the target market to be dissatisfied with the current variety of services. If 17 out of 167 respondents are dissatisfied with the variety of services, is this greater than 20 percent?

$$\begin{array}{ll} H_0: p \leq .2 & s = 167(.2) + 1.645\sqrt{167(.2)(.8)} \\ H_A: p > .2 & s = 41.90 \end{array}$$

As 17 is less than 41.90, the null hypothesis is not rejected. Data supports that less than 20 percent of the target market may be dissatisfied with the current variety of services.

Question 15

Management accepts up to and including 20 percent of the target market to be dissatisfied with the responsiveness and professionalism of the ambulance and crew. If 14 out of 83 respondents are dissatisfied, is this greater than 20 percent?

$$H_0: p \leq .2 \qquad s = 83(.2) + 1.645\sqrt{83(.2)(.8)}$$

$$H_A: p > .2 \qquad s = 22.59$$

As 14 is less than 22.59, the null hypothesis is not rejected. Data supports that less than 20 percent of the target market may be dissatisfied with the ambulance service.

Question 17

Management accepts only 1 percent or less of the target market to be dissatisfied with the Branch Clinic 237 staff attitude or medical care. If 119 out of 167 respondents are dissatisfied, is this greater than 1 percent?

$$H_0: p \leq .01 \qquad s = 167 (.01) + 1.645\sqrt{167(.01)(.99)}$$

$$H_A: p > .01 \qquad s = 3.785$$

As 119 is greater than 3.785, the null hypothesis is rejected. Data supports that greater than 1 percent of the target market is dissatisfied with the staff attitude and medical care.

Question 18

Management accepts up to and including 5 percent of the target market to be unaware of the avenue of complaint or suggestion. If 56 out of 167 respondents were unaware, is this greater than 5 percent?

$$H_0: p \leq .05 \qquad s = 167(.05) + 1.645\sqrt{167(.05)(.95)}$$

$$H_A: p \Delta .05 \qquad s = 12.98$$

As 56 is greater than 12.98, the null hypothesis is rejected. Data supports that more than 5 percent of the target market is unaware of the avenue of complaint/suggestion.

The results of this determination of the level of dissatisfaction in the target market is utilized to develop the marketing mix presented in the second chapter of this paper.

## FOOTNOTES

<sup>1</sup>Daniels, Biostatistics, pp. 160 and 161.

<sup>2</sup>Wayne W. Daniel, Applied Nonparametric Statistics, (Boston: Houghton Mifflin Company, 1978), p. 50.

SELECTED BIBLIOGRAPHY

## SELECTED BIBLIOGRAPHY

Interviews

Interview with Beckham, Daniel, Vice-President of Development and Marketing, Highland Park Hospital, Highland Park, Illinois. Interview, August 18, 1982.

Interview with Fitzgerald, Joyce, Director of Public Relations, Lake Forest Hospital, Lake Forest, Illinois. Interview, August 25, 1982.

Interview with Moore, Neil, Student Accounting, Management and Control Officer, Service School Command, Naval Training Center, Great Lakes. Multiple personal and telephone interviews.

Interview with Oxendale, Sharon, Assistant Vice-President for Planning, Lutheran General Hospital, Park Ridge, Illinois. Interview, August 16, 1982.

Focus Group Interview with RM2 Tevis, Assistant Company Commander, Company 263, 26th Battalion; ETCS Hall, Adjutant, 2nd Regiment; FTGM Green, Adjutant, 3rd Regiment; FTGC Place, Company Commander, Company 311, 31st Battalion; MMCM Baughman, Adjutant, 1st Regiment; MMC Bays, Adjutant, 1st Regiment, 12th Battalion, Naval Training Command, Great Lakes, Illinois, 8 April 1983.

Focus Group Interview with LT R. E. Rohnssen, EM, ITC; LT P. G. Gregory, Director Diesel/Gas Turbine; CWO3 L. L. Kurtz, Director FT A School; LT Manzl, Director Gunnary School; LT Turley, Director Adv STM Training; LT Belanger, Director BE and E; LT Jones, Director PE School, Naval Training Command, Great Lakes, Illinois, 8 April 1983.

Interview with Ruby, Perry M., LCDR, MSC, USN, Regional Coordinator for Branch Clinic, and Isley, Wynett A., ENS, MSC, USN, Officer-in-Charge, Branch Clinic 237. Interview, 15 April 1983.

Books

Kotler, Philip. Marketing for Non-Profit Organizations. 2nd Edition. Englewood Cliffs: Prentice-Hall, Inc., 1982.

MacEachern, Malcolm T. Hospital Organization and Management. Chicago: Physicians' Record Company, 1957.

McCarthy, E. Jerome. Basic Marketing. 6th Edition. Homewood: Richard D. Irwin, Inc., 1978.

Books (Continued)

- McMillan, Norman H. Marketing Your Hospital: A Strategy for Survival. Chicago: American Hospital Association, 1981.
- Stanton, William J. Fundamentals of Marketing. 5th Edition. New York: McGraw-Hill Book Company, 1978.

Periodical

- StethoScoop, Vol. 10, No. 4, St. Therese Medical Park, Waukegan, Illinois 60085, August-September 1981.

Articles

- "A Do-it-yourself Market Audit," Profiles in Hospital Marketing 1 (1st Quarter, 1981): 42-48.
- Berkowitz, Eric N. "Marketing Ambulatory Care Centers: Planning Considerations and Demand Analysis." The Journal of Ambulatory Care Management 4 (August, 1981): 15-26.
- Berkowitz, Eric N.; Hillestad, Steven, and Effertz, Pamela. "Marketing/Public Relations--A New Arena for Hospital Conflict." Health Care Planning and Marketing 1 (January 1982): 1-10.
- Briscoe, J. Robert. "Marketing and the Multihospital Setting." Topics in Health Care Financing 6 (Summer, 1980): 35-42.
- Carlova, John. "Will Low-Cost 'Healers' Replace M.D.'s?" Medical Economics 59 (August 9, 1982): 84-90.
- "Cable TV Can Enhance Hospital Marketing, Community Relations." Hospitals 55 (November 16, 1981): 47-49.
- Clarke, Roberta N. "Marketing Health Care: Problems in Implementation." Health Care Management Review 3 (Winter, 1978): 21-27.
- Clarke, Roberta N. and Skyavitz, Linda. "Marketing Information and Marketing Research - Valuable Tools for Managers." Health Care Management Review 6 (Winter, 1981): 35-41.
- Clarke, Roberta N. and Skyavitz, Linda J. "Market Research: When, Why and How." Health Care Management Review 7 (Winter, 1982): 29-34.



Articles (Continued)

- Cohen, Arlene G. "Hospital Services in Terms of Marketing Mix." Hospital Topics: 16-17 and 20.
- Cooper, Philip D.; Maxwell, Richard B. and Kehoe, William J. "Entry Strategies for Marketing in Ambulatory and Other Health Delivery Systems." The Journal of Ambulatory Care Management 2 (May, 1979): 47-54.
- Cunningham, Robert M. "Rise in Malpractice Claims Forces Look at Previous Scare." Hospitals 55 (March 16, 1981): 85-86, 88 and 90.
- DeChant, Thomas A. and Greenman, Barbara W. Health Planning: A Marketing Challenge Madison: Institute for Health Planning, 1982.
- DeNoyer, James R. "Hospitals Seek Ways of Relating to Communities." Hospitals 51 (April 1, 1977): 127-128 and 130-131.
- Editorial. "Should We Market Health Care?" Hospitals 51 (June 1, 1977): 51.
- Edwards, Suzanne S. "Would You Listen to What They're Saying." Hospitals 53 (March 1, 1979): 82-84.
- Falberg, Warren C. and Bonnem, Shirley. "Good Marketing Helps a Hospital Grow." Hospitals 51 (June 1, 1977): 70-72.
- Flexner, William A. and Berkowitz, Eric N. "Marketing Research in Health Services Planning: A Model." Public Health Reports 94 (November-December, 1979): 503-513.
- Fryzel, Ronald J. "Marketing Nonprofit Institutions." Hospital and Health Services Administration 23 (Winter, 1978): 8-16.
- Fyfe, Ann E. and McCarthy, Joseph B. "Developing a Hospital Advertising Campaign." Hospital Forum 24 (November-December 1981): 19-22, 24 and 26.
- Gallegos, Karen. "A Sampling of Marketing Techniques." Medical Group Management 28 (September/October 1981): 30-32, 34 and 38.
- Garrett, Jim. "Hospital Marketing: A First Hand Account." Texas Hospitals 35 (March, 1980): 16-18.

Articles (Continued)

- Garton, Tim. "Marketing Health Care: Its Untapped Potential." Hospital Progress 59 (February, 1978): 46-50 and 80.
- Graff, Louis. "On Patient Satisfaction, Marketing, Research, and Other Useful Things." Hospitals 53 (January 16, 1979): 59-62.
- Gugg, Thomas E. and Voyvodick, Marc E. "Marketing: Fast Becoming A Necessary Tool For Hospital Administrators." Hospitals 53 (April 1, 1979): 141-144.
- Griffith, John R. "Defining Hospital Market Efficiency - The Community's Task." Hospital Progress 60 (November, 1979): 48-52.
- Haas, David. "Marketing: A Tool for Long Term Care Administration." American Health Care Association Journal 6 (March, 1980): 4-6, 8, 12 and 14.
- Halenar, John F. "How Far Profit Hospitals Are Going After Your Patient." Medical Economics 59 (August 9, 1982): 224-232.
- Herkimer, Allen G. "Marketing - A Tool for Survival." Hospital Financial Management (September, 1980): 12, 13, 16 and 18.
- Hospital Headlines, "Marketing Viewed as Key to Survival for Many Hospital." Hospitals 53 (September 1, 1979): 18.
- Ireland, Richard C. "Using Marketing Strategies to Put Hospitals On Target." Hospitals 51 (June 1, 1977): 54-58.
- Jeghers, Sanderson J. and Davis, James E. "The Marketing Mystique." Texas Hospitals 35 (March, 1980): 12-15.
- Kaplan, Michael D. "What It Is, What It Isn't." Hospitals 53 (September 16, 1979): 176, 180, 182, 184 and 186.
- Karr, David D. "Increasing A Hospital's Market Share." Hospitals 51 (June 1, 1977): 64-66.
- Kuth, Jon G. "Marketing Health Care: What the Recent Literature is Telling Us." Hospital and Health Services Administration 26 (Special II, 1981): 66-84.

Articles (Continued)

- Kiley, Patrick J. "Marketing Mania: A Brief Look at What The Process Is All About." Texas Hospitals 35 (March, 1980): 8-10.
- Korneluk, Greg N. "Launching a Successful Satellite Clinic: A Marketing Approach." Medical Group Management (September/October 1981): 56-58.
- Lorenz, Clifford J. "Three Hospitals Join Forces for Survey." Hospitals 54 (August 16, 1980): 129, 130 and 182.
- Luke, Roice D. and Modrow, Robert E. "Marketing and Accountability in Health Care." Hospital and Health Service Administration 26 (Summer, 1981): 51-63.
- MacStravic, Robin E. Scott. "Market Positioning: Customer and Product Mix." Health Care Planning and Marketing 2 (October, 1981): 47-56.
- MacStravic, Robin E. Scott. "Market Research in Ambulatory Care." The Journal of Ambulatory Care Management 4 (May, 1981): 33-40.
- MacStravic, Robin E. Scott. Marketing For the 80's presented at Hospital Affiliates International, Inc., 1980 Administrators' Conference, Phoenix, Arizona, May 1-2, 1980.
- Mages, Patrick M. "Applied Hospital Marketing: An Early Model." Hospital Management Communications 4 (April, 1980): 2 and 3.
- Mages, Patrick M. "Marketing - A Hospital Management Philosophy." Hospital Management Communications 4 (March, 1980): 2 and 3.
- Mages, Patrick M. "Ten Hospital Marketing Myths." Hospital Management Communications 4 (February, 1980): 2-4.
- McMillan, Norman H. "Marketing: A Tool That Serves Hospitals' Survival Instincts." Hospitals 55 (November 16, 1981): pp. 89-92.
- Miaoulis, George. "After the Marketing Audit." Profiles in Hospital Marketing 3 (3rd Quarter, 1981): 82-84.
- Military Family Resource Center. "Retention Study Focuses on Family Factors." Military Family 3 (January-February, 1983): 1 and 2.

Articles (Continued)

- Miller, John A. "Marketing Basics for Hospital Managers." Hospital Forum 23 (July/August, 1980): 7 and 10-12.
- Miseveth, Paul A. "Marketing Ambulatory Care." Hospital Progress 59 (March, 1978): 58-61 and 80.
- Nelson, Arthur A. "Marketing: Relevance to Professional Practice." Pharmacy Management 151 (January-February, 1979): 21 and 22.
- O'Halleron, Richard D.; Staples, Jeffry, and Chiampa, Paul. "Marketing Your Hospital." Hospital Progress 57 (December, 1976): 68-71.
- Pitts, Robert E. "Need Analysis in the Health Care Facility: A Marketing Approach to the Community." Health Services Manager 13 (February, 1980): 8-10.
- Rapoport, Roger. "A Candle for St. Greed's." Harper's Magazine (December, 1972): 70-72 and 75.
- Rice, James A.; Slack, Richard S.; and Garside, Pamela A. "Hospitals Can Learn Valuable Marketing Strategies From Hotels." Hospitals 55 (November 16, 1981): 95-102.
- Robinson, Larry M. and Cooper, Philip D. "Roadblocks to Hospital Marketing." Journal of Health Care Marketing 1 (Winter, 1980-1981): 18-24.
- Scheier, Neil R. "Health Care Marketing: Not for Large Institutions Only." Hospital Topics 57 (May/June, 1979): 16 and 17.
- Seaver, Douglass J. "Hospital Revises Role, Reaches Out To Cultivate and Capture Markets." Hospitals 51 (June 1, 1977): 59-66.
- Sherlock, John F. "New Marketing Tool: The Patient Handbook." Fund Raising Management 12 (March, 1981): 54 and 55.
- Simon, James K. "Marketing The Community Hospital: A Tool for the Beleaguered Administrator." Health Care Management Review 3 (Spring, 1978): 11-23.
- Stuehler, George. "How Marketing and Planning Relate." Hospitals 54 (May 1, 1980): 96-99.

Articles (Continued)

- Tucker, Stephen L. "Health Care Marketing: Maximizing Your Competitive Position." Health Services Manager 14 (April, 1981): 1 and 2.
- Tucker, Stephen L. "Introducing Marketing as a Planning and Management Tool." Hospital and Health Services Administration (Winter, 1977): 37-44.
- Tucker, Stephen L. "Marketing Research Tools for Hospital Management." Texas Hospitals 35 (March, 1980): 20-22.
- Wexler, Nat N. "What Is Marketing?" Hospitals 51 (June 1, 1977): 52-53.
- Wittelle, Marvyn. "Marketing Rx for Hospitals." North Shore 5 (July, 1982): 45-59.
- Wise, Pat S. Yoder. "Needs Assessment as a Marketing Strategy." The Journal of Continuing Education in Nursing 12 (1981): 5-9.
- Zufall, Dorothy L. "How to Adapt Marketing Strategies In Health Care Public Relations." Public Relations Journal (October, 1981): 15.