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The leadership of Kimbrough Army Community Hospital has been forced to rely on a shrinking body of guidance upon which to base the organization's strategic plan. It was decided that alternative sources of guidance must be found and that the military healthcare beneficiary should be looked to as the first "new" source of guidance. A review of the literature suggests that one way to secure this input from beneficiaries is through the use of a survey instrument.

The purpose of this study is to describe the process of gathering beneficiary input throught the use of a survey instrument. Anticipated and actual findings are listed as well as hypotheses adopted and rejected.

Significant differences were found among beneficiary groups in their levels of satisfaction with services. Differences were also found to exist among beneficiary groups in levels of support for some proposed new services. Additionally, specific levels of patient satisfaction with services and clinics were measured and may be used to focus first on those areas most in need of improvement, as well as to identify those areas with which beneficiaries are most satisfied.

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at
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A Graduate Management Project

Submitted to the Faculty of

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by

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ABSTRACT

The leadership of Kimbrough Army Community Hospital (KACH) has been forced to rely on a shrinking body of guidance upon which to base the organization's strategic plan. It was decided that alternative sources of guidance must be found and that the military healthcare beneficiary should be looked to as the first "new" source of guidance. A review of the literature suggests that one way to secure this input from beneficiaries is through the use of a survey instrument.

The purpose of this study is to describe the process of gathering beneficiary input through the use of a survey instrument. Hypotheses and findings are listed.

Significant differences in satisfaction levels were found to exist among beneficiary groups. Retiree beneficiaries reported the highest levels of satisfaction with existing services while active duty beneficiaries reported the lowest levels of satisfaction with existing services. Significant differences in support for inpatient psychiatric care were also found to exist among beneficiary groups with support highest among active

duty family members and lowest among retirees. Also, levels of patient satisfaction with services and clinics were measured. Mean satisfaction levels were highest for the EENT clinic and lowest for the Emergency Room.

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TABLE OF CONTENTS

PAGE

ABSTRACT..... 2

CHAPTER

I. INTRODUCTION
Conditions Prompting the Study..... 5
Statement of the Management Problem..... 8
Review of the Literature..... 9
Purpose..... 20

II. METHODS AND PROCEDURES
Sample Design..... 22
Instrument..... 24

III. RESULTS..... 28

IV. DISCUSSION..... 30

V. CONCLUSIONS AND RECOMMENDATIONS..... 44

IV. REFERENCE LIST..... 48

V. EXHIBIT
Survey Instrument..... 51

VI. TABLES
One: Beneficiary Group Representation... 59
Two: Variable Listing..... 60
Three: Descriptive Statistics for Sample.. 63
Four: Descriptive Statistics:
Overall Care..... 64
Five: Descriptive Statistics:
Services..... 65
Six: Descriptive Statistics:
Availability..... 67
Seven: Descriptive Statistics:
Access..... 69
Eight: Descriptive Statistics:
Other..... 71
Nine: Mean Satisfaction Ratings for
Clinics/Services..... 72

I. Introduction

A. Conditions Prompting this Study

Like that of other hospitals and organizations, the mission of Kimbrough Army Community Hospital (KACH) is the basis of a constantly evolving strategic plan and direction. Historically, the manner in which mission gives rise to strategic direction has been driven by guidance from Health Services Command (HSC) and from regional headquarters, Walter Reed Army Medical Center (WRAMC). In recent years though, dramatic change, globally, nationally, and locally, has reduced the ability of these sources to provide the solid strategic guidance upon which KACH had come to rely. Globally, the threat upon which the overall size of the military was based is said to have declined. Operations Desert Shield and Storm triggered a re-evaluation of the appropriate active duty-reserve force mix that we will rely on in the future. Presently, uncertainty continues to build with regard to unrest in the former Soviet republics,

increasingly hostile rhetoric from North Korea, operations in Somalia, and the war in Bosnia. With the arrival of a new administration, change is taking place just as rapidly on the national level. Locally, the roles of all federal healthcare facilities in the national capital region, particularly Army facilities are changing on a daily basis.

The pace and magnitude of this collective change has had the effect of creating more uncertainty than ever for the Army Medical Department (AMEDD), and specifically, KACH. Some AMEDD organizations have become what some researchers refer to as "reactor" organizations. These organizations are characterized as lacking a clearly defined strategic focus with frequently changing business definition and scope. Reasons offered for this condition include 1) failure of top management to clearly articulate the organization's strategy, 2) a failure of top management to fit the organization's structure and processes to its strategy, and 3) a tendency for management to maintain the organization's strategy-structure relationship despite overwhelming changes in environmental conditions (Miles and Snow,

1978). To continue providing beneficiaries with the best care possible, and to avoid becoming a "reactor," the senior leadership of KACH has recognized the need to be proactive in charting its own strategic direction. As the flow of strategic guidance from traditional sources continues to slow, KACH leadership has recognized that the organization must find other sources of rational information upon which to chart strategic direction.

In its weekly strategic planning session, the executive staff of KACH recognized the need for an internal source of rational strategic guidance. It was decided that the most logical source of internal strategic guidance was the healthcare beneficiary. It was also noted in this forum that, while the beneficiary had always existed as a source of strategic guidance, the abundance of guidance from other sources (higher headquarters) had obscured the value of this resource. Finally, it was acknowledged that the most logical approach to harnessing this source would be a formal assessment of the needs and wants of the KACH beneficiary population.

The conditions of this study are probably no more or less urgent at KACH than they are in other military facilities. Quality patient care continues to be delivered, but it has become increasingly difficult to communicate a sense of strategic direction to staff and beneficiaries. By assessing beneficiary needs and wants, the basis for a renewed strategic direction can be developed. This research will help guide the hospital in how best to serve our community (Inguanzo, 1991).

B. Statement of the Management Problem

The management problem in this study is: as the flow of strategic guidance from traditional sources is reduced, Kimbrough Army Community Hospital must look elsewhere for the guidance necessary to chart its strategic direction. The most promising "new" source of this guidance is the KACH beneficiary population. To fully utilize this source of guidance, the hospital must endeavor to learn more about the needs, wants, and desires of its beneficiary population.

C. Literature Review

The review of literature enables the researcher to frame his or her efforts in the context of what others have found to be successful and workable. With regard to this study, the literature review revealed that, while much has been written about the value of environmental assessment as a marketing tool, little has been done to apply this valuable tool directly to the strategic planning process.

Subject Areas

A comprehensive review of recent literature revealed four main subject areas most relevant to the management problem: strategic management, marketing, environmental assessment and analysis, and patient satisfaction. For the purpose of clarity, it is useful to operationally define the relationships among these four areas. First, strategic management is a broad-based integrated management activity that identifies where the organization should be heading in the future (Pegels and Rogers, 1991). It involves the analysis of resources and the environment, organizational goal formulation, strategy formulation,

organization and systems design (Kotler, 1987). Second, marketing is the more specific analysis, planning, implementation, and control of carefully formulated programs which are typically developed in the strategic management process. Third, deliberate environmental analysis is a common element of quality strategic planning and marketing. Marketing based environmental analysis results in a product which not only meets marketing requirements, but also the requirements of the strategic planning process. The environmental analysis itself is concerned with identifying marketing opportunities, threats, environmental trends and their implications (Kotler, 1987). A full environmental analysis of the KACH market would address many factors other than beneficiaries. This study though, is limited to an assessment of KACH beneficiary needs, wants and desires to be used as a basis for beneficiary oriented strategic planning. Finally, what patients report in terms of their satisfaction with the care they receive defines what **they** want, need, and desire from their care providers and can help to provide this basis for beneficiary oriented strategic planning.

Definition of Terms

At this point, the question might be posed, "Just what is a **patient need**, and does it mean the same thing to everyone?" Clearly, definitions of the term, "need," differ depending on who defines the term. Dictionaries define "need" as a "want," or "necessity." In some cases such as an accident involving a broken bone, the medical "need" is apparent. For other conditions, **perceived** need for care depends on the beliefs and knowledge of the person affected, and on that person's value judgments. (Buchan and Hill, 1990; Cunningham, 1990). Few patients have the expertise to distinguish with complete accuracy the difference between a medical "need" and a medical "want." Further, few patients who receive healthcare services have the medical knowledge to assess the care they received. They rely on certain non-clinical cues and processes surrounding the core medical service when they evaluate their healthcare (Delene, 1992). Additionally, consumers rely increasingly on sources such as friends and relatives as their main source of health care information as opposed to their physicians

(Christensen and Inguanzo, 1989). This is not to say that patients are not astute with regard to the quality of the medical care they receive, only that their perceptions of care seem to be related more to non-clinical indicators than to the care itself.

Defining the term **"patient satisfaction"** can be equally tenuous. Cleary (1988) defines it as a cognitive and emotional reaction to experiences of healthcare; it is a measure of attitudes. Bowling (1992) refers to a literature search of almost 100 references to the patient satisfaction literature by Farquhar (1987) in which only one author attempted to define satisfaction to respondents. While it may be difficult to define, attempts to measure patient satisfaction which are demonstrably reliable and valid, are of great value in a number of areas. Nursing researchers Bond and Thomas (1992) point out that purposes of measuring patient satisfaction are many: evaluation of the quality of care; evaluation of the effectiveness of educational interventions for nurses; evaluation of the effectiveness of educational intervention for patients; evaluation of the effectiveness of an organizational intervention.

Donabedian (1987) also argues that consumers are invaluable sources of information in judging the quality of care delivered. In the course of this study, it will also be shown that measuring patient satisfaction can be a highly effective way of assessing beneficiary needs and building a basis for rational strategic planning.

As stated, discussion of survey instruments in healthcare literature is largely limited to the context of patient satisfaction. For this reason, the extensive literature on surveying patient satisfaction serves as the basis for developing an instrument which assesses patient satisfaction as an indicator of patient wants, needs, and desires.

Marketing in the Military

The literature provides much evidence of a transition in healthcare which has taken place over the last decade. It seems that questions such as the morality of marketing in health care have largely been answered as evidenced by the almost complete recognition by the industry that marketing does have a place in health care. Moreover, customers, providers, and administrators alike acknowledge their role within the

scope of marketing in varying degrees (Dianaemann and Wintz, 1992). As the need for marketing is acknowledged, so is the necessity of gaining a knowledge of customer needs, wants, and desires. Unfortunately, it seems that there is still some confusion and resistance to the idea of marketing in the military health care industry. The few articles which address the military specifically, point to the relative lack of emphasis in the military health care setting on the importance of marketing (Rubenstein, 1990). Because an integral part of marketing is assessing customer needs, the literature seems to indicate further that our knowledge of the needs of military healthcare beneficiaries is lacking. Other research offers promise if it can be applied in the military healthcare setting. In particular, as marketing tools such as needs assessment are applied, we can gain an appreciation of our different beneficiary constituencies and move toward a "client orientation" (Dianaemann and Wintz, 1992).

Patient Perceptions

To gain this "client orientation," one major issue which must be considered is that of patient

perceptions of the care they receive. Kurata et.al. (1992) compared patient and provider perception to satisfaction with medical care and estimates of waiting time in five outpatient family medicine clinics. They found that patient perceptions consistently differ from provider perceptions of the same encounter. This finding is consistent with other studies which indicate that patient perceptions differ consistently from those of providers (Orden et.al., 1978, Piper, 1989, Hilton, Butler and Nice, 1984, and Rashid et.al., 1989). In this regard the literature demonstrates that staff perceptions of care are not a valid indicator of patient perceptions of the same care. It is sometimes difficult for providers to understand how patient perceptions can be so removed from medical "reality." One researcher phrases it this way, "the discretionary customer has no basis for independently evaluating technical quality. All physicians have medical degrees, fancy equipment, white coats, a confident demeanor and claim to provide excellent care. So the customer makes his judgment on the basis of non-technical factors.... The perceptual or emotional aspects become the surrogate measures of

quality" (Sweeney, 1987). Frequently, the patient's experience results in stronger opinions about the provider seen and the organization. These beliefs or opinions affect attitude formation the next time the need is present. Good or bad experiences can lead to verbal comments about the experience that become vicarious experiences for others and influence their beliefs about the service provider (Matulich and Finn, 1989). One patient whose experience was less than optimal reported that he "wouldn't go back there if he broke his leg on the hospital's front porch." Undoubtedly the interviewer was not the only person to whom this patient related his opinion of this particular facility. Some researchers go even farther by defining this bifurcation of patient expectations and perceptions as a "service quality gap" (Delene, 1992; Jensen, 1991). This conclusion is based on the premise that patient satisfaction indicators also serve as legitimate indicators of service quality.

Defining the Research Question

While reviewing literature in the areas of strategic management, marketing, and environmental assessment, the danger of defining the research

question too narrowly became apparent. One might be tempted to ask the research question, "What services do our beneficiaries want that we do not now provide?" To frame the question only in terms of new services however, would be to arbitrarily answer part of the question ourselves by failing to allow beneficiaries to comment on **existing services**. The body of literature in this area makes it clear that, in the pursuit of customer driven strategic guidance, it is often more important to assess customer **satisfaction** with existing services, than it is to assess their support for proposed new services. It has been said that rather than asking "What can or should be done?" a more appropriate question might be "What is being done?" (McDevitt and Shields, 1985). Thus, the evaluation of existing services can be a logical starting point for organizations considering new services.

Approaches to the Survey Instrument

As the researcher seeks to find answers to these questions, a number of tools are at his or her disposal. Information can be gathered through the use of focus groups, telephone surveys and written surveys

delivered in person or by mail. The focus group is effective but time consuming for participants. The telephone survey is economical and enables the researcher to reach a large number of people but is limited in the number of questions that can be asked due to the time involved. The mail survey is effective because it is relatively inexpensive and is less time intensive for the beneficiary than other survey approaches. Additionally, the mail survey can be completed at the convenience of the participant and analyzed at the convenience of the researcher. Most patient satisfaction surveys use one of four basic approaches. The first approach is to question patients about their satisfaction, in general, with physicians, and healthcare organizations. This approach is useful in gauging overall levels of satisfaction but does not reveal much about perceptions regarding individual providers. A second approach has been to question patients about their own physicians. Obviously, this approach is limited to attitudes about individual physicians. A third approach is to question patients about their most recent encounters with their provider to determine

which components of the care encounter they did and did not like. A fourth method used is the exit interview. This approach has been used to ascertain why patients leave a particular practice (Weiss and Senf, 1990). The first approach, querying patients as to their overall levels of satisfaction with the care they receive, best lends itself to the process of assessing patient needs, wants, and desires.

Specific Focus

Having compared the stated management problem to contemporary literature, the specific focus is now to draw upon the experience of other researchers to develop and administer a survey instrument to KACH beneficiaries. Focusing on specific market aspects of overall care, service satisfaction, service availability, access to care, and "other" which will include courtesy and respect, provider competence, and communication, the researcher seeks to use the instrument as a tool to derive data about beneficiary needs, wants, and desires. Specifically, this data will be derived by analyzing **differences** among beneficiary groups in each market aspect. This data will then be analyzed and the resulting information

may then be used as a basis for strategic planning in the organization.

D. Purpose

The purpose of this study was to develop a body of organizational knowledge of beneficiary wants, needs and desires. This knowledge is to be used in the ongoing process of charting the organization's strategic direction. Items in the survey instrument were grouped into five major market aspects of hospital service: 1) overall care, 2) services, 3) availability of care, 4) access to care, and 5) other facets including courtesy and respect, provider competence, and communication. Certain items on the survey were included in each market aspect and sought to elicit reliable data within the framework of the particular aspect. Beneficiary responses to items were analyzed collectively and by stratified beneficiary category. In this manner, the responses of members of the five main beneficiary categories could be evaluated separately and differences between groups examined.

Working Hypotheses

HA1: Differences in satisfaction with overall care exist among beneficiary groups.

HA2: Differences in satisfaction with hospital services exist among beneficiary groups.

HA3: Differences in satisfaction with availability of services exist among beneficiary groups.

HA4: Differences in satisfaction with access to care exist among beneficiary groups.

HA5: Differences in satisfaction with other items (courtesy and respect, provider competence, and hospital communication) exist among beneficiary groups.

II. Methods and Procedures

A. Sample Design

When a researcher decides to survey a given population, he or she may elect to conduct a census of every member of the population, or may obtain the views of a sample. Where a sample is used, its composition should represent the population from which it is drawn. Clearly, cost and time limitations preclude the census approach for this study. Additionally, a sample is usually superior to a census because potential biases encountered in trying but failing to include all members of the population can be more effectively controlled in a sample of the population (Fitzpatrick, 1991). Following the sample approach, a stratified random sample of 1,560 beneficiaries (table 1, page 59) of the KACH catchment area was developed from data obtained from the Defense Eligibility, Enrollment and Reporting System (DEERS) center in Monterey CA. This sample size represented approximately 2.8% of the total population (N=56,001).

DEERS records of 56,001 beneficiaries in the KACH catchment area were received in ASCII format and entered into a database. To enhance the response rate, records of beneficiaries who had not updated their DEERS status in the last two years were discarded. Five beneficiary subgroups were then developed which consisted of active duty, active duty family members, retirees, retiree family members, and survivors. The decision to develop beneficiary subgroups was based on the marketing principle of market segmentation which assumes that no one strategy will work for an entire market and divides overall markets into discrete segments (Blonna, Broadbent and King, 1991). The size of each subgroup was dictated by its proportionate presence in the total population (table 1, page 59). A possible weakness of the study is that, despite careful stratification of the mail-out sample, active duty family members are significantly under-represented and retirees are significantly over-represented in the return sample. Randomness of selection within each subgroup was assured through the use of a random numbers table from which digits were extracted and used to identify the

last digit of each beneficiary's social security number (SSN). To avoid sending more than one survey to the same household, different digits were used when identifying beneficiaries such as active duty and active duty family members. To ensure representation among all age groups, children were not excluded from the sample and sponsors were asked to respond on behalf of those too young to complete the survey themselves. After building each subgroup sample, all five were merged into one database file of 1560 records from which mailing labels were generated for the 1560 surveys mailed out.

B. Instrument

The survey instrument (exhibit 1, page 51) consisted of twenty-eight total items. Nine items (numbers 1-9) were designed to elicit demographic data including beneficiary status, source and type of most recent care, years in the local area, driving time to KACH, education level, gender, and age. Eight items (numbers 10, 15, 16-19, 24-25) were designed to elicit the beneficiary's level of satisfaction with services and utilized a five-point continuous Likert type scale. On this five-point scale, a response of

"excellent" was coded as a one, "good" as a two, "satisfactory" as a three, "unsatisfactory" as a four, and "poor" as a five. For this reason, the **lower** the mean rating for items, the **higher** the satisfaction level. Because the reliability of items increases as the number of response alternatives increases, this five-point scale was used (Fitzpatrick, 1991). Two items (numbers 13, 23) were designed to yield dichotomous (yes, no) data concerning availability of services. Three items (numbers 11, 12, 20) were designed to yield dichotomous (yes, no) data concerning access to KACH services. Three other items were designed to yield dichotomous data concerning whether beneficiaries avoid KACH, opinions of restoring full obstetrical care to KACH, and opinions of initiating inpatient psychiatric care at KACH (numbers 14, 22 & 21 respectively). All dichotomously coded items (yes-no) were coded for analysis by coding a yes response as a one and a no response as a zero. In this manner, the proportion of the sample that responds "yes" to a given item will also be the mean for that item. Items 26 and 27 asked beneficiaries what they liked most and least about

KACH and were not designed to elicit quantitative responses. The 28th and last item asked the beneficiary to **voluntarily** provide name and telephone number for follow-up purposes if necessary. All twenty-five quantitative items were treated as variables for the statistical analysis. Item 25 asked the beneficiary's opinion of the two services they had most recently used and, as a result, yielded two variables, hence a total of 26 quantitative variables were available for analysis (table 2, page 60). For analysis purposes, variables were grouped into five market aspects: overall care, services, availability, access, and other (table 2, page 60).

As this survey instrument was designed to be administered only once, reliability and validity were not specifically established. The survey instrument was pre-tested on a convenience sample of fifty beneficiaries within the hospital and adjustments were made in the final instrument on the basis of this pre-test. This allowed potential problems to be predicted and helped to assure the clarity and acceptability of survey items. Specifically, the format of survey items was adjusted to facilitate

coding of data extracted from returned surveys. Also, comments received on some pre-test surveys indicated instructions were less than completely clear. On the basis of this input, instructions were reworded where necessary. This approach is well documented in contemporary literature (Fitzpatrick 1991). The final survey instrument was distributed to the sample of 1560 beneficiaries in a single mailing with a cover letter explaining the purpose of the study and guaranteeing complete anonymity to the respondent. Each survey also included a franked business reply envelope to ensure postage costs would not hinder return rate.

III. Results

A total of 366 usable surveys were returned for a return rate of 23.5%. A variable listing and descriptions of each are at table 2, page 60. Descriptive demographic statistics are at table 3, page 63. Specific findings follow and are discussed at section IV, Discussion.

Findings

1) Significant differences in satisfaction with **overall care** were found to exist among beneficiary groups. One-way analysis of variance (ANOVA) revealed levels of satisfaction with overall care did vary significantly among beneficiary groups (table 4, page 64).

2) Significant differences in satisfaction with hospital **services** were found to exist among beneficiary groups. One-way ANOVA revealed that responses to five of the six items included under "services" did vary significantly among beneficiary groups (table 5, page 65).

3) Significant differences in satisfaction with **availability** of services were found to exist among beneficiary groups. One-way ANOVA revealed that responses to three of four items included under "availability" did vary significantly among beneficiary groups (table 6, page 67).

4) Significant differences in satisfaction with **access** to care were **not** found to exist among beneficiary groups. One-way ANOVA revealed that responses to all three items included under "access" did **not** vary significantly among beneficiary groups (table 7, page 69).

5) Significant differences in satisfaction with **courtesy and respect** were found to exist among beneficiary groups. One-way ANOVA revealed that responses to "COURTRES," included under the market aspect "other," did vary significantly among beneficiary groups (table 8, page 71).

6) Significant differences in satisfaction with **provider competence** were found to exist among beneficiary groups. One-way ANOVA revealed that

responses to "PROVCOMP," included under the market aspect "other," did vary significantly among beneficiary groups (table 8, page 71).

7) Significant differences in satisfaction with **KACH communication** were found to exist among beneficiary groups. One-way ANOVA revealed that responses to "KACHCOMM," included under the market aspect "other," did vary significantly among beneficiary groups (table 8, page 71).

IV. Discussion

Overall Care

On the basis of one-way ANOVA ($F=5.84$, $p<.01$) significant differences in satisfaction with overall care were found to exist among beneficiary groups (table 4, page 64). Retiree and retiree family member beneficiary groups, in particular, reported higher levels of overall satisfaction than did active duty and active duty family member beneficiary groups. The tendency of retiree groups to report higher levels of satisfaction may be due to a greater tolerance of waiting time or, as advancing age necessitates more

care, retiree groups may tend to be less critical of this source of care. Typically, though, the time involved in seeking and acquiring care is less of an irritant for retirees than it might be to other beneficiary groups who have less time to spend seeking care. It is also possible that specific beneficiary experiences at KACH influence levels of satisfaction with overall care. If retirees associate overall care with the internal medicine clinic for example, while active duty beneficiaries associate overall care with the ER experience, it should be no surprise that retirees report higher levels of satisfaction with overall care.

Services

Significant differences in satisfaction with hospital services were also found to exist among beneficiary groups. A total of six survey items were included under the market aspect "services." Descriptive statistics for each are at table 5, pages 65-66.

The first item under "services" was "AVOIDKIM." On the basis of Chi Square testing (table 5, page 65), the degree to which respondents reported that they

avoid coming to KACH for care was **not** found to vary significantly among beneficiary groups. Overall, 44% of respondents reported they did avoid seeking care at KACH (table 5, page 65). Written comments indicated that most beneficiaries who "avoid" KACH do so because of the distance they live from KACH.

The second item under "services" was "EREXP." On the basis of one-way ANOVA ($F=8.53$, $p<.01$), levels of satisfaction with the ER service were found to vary significantly among beneficiary groups (table 5, page 65). Active duty and active duty family member beneficiary groups reported the lowest levels of satisfaction and retirees reported the highest levels of satisfaction (table 5, page 65). Of the services they were asked to evaluate, beneficiaries indicated they were least satisfied with the ER service (table 9, page 72). One possible explanation for these differences is that active duty and active duty family members, particularly children, tend to utilize emergency services more heavily than do other beneficiary groups. The very nature of emergency services requires that most patients endure at least some waiting which can make an unpleasant experience

even worse. As mentioned previously, retiree groups may tend to endure long waits associated with the ER service more readily than other groups. Active duty and active duty family member beneficiaries do use the ER service more often than do other beneficiary groups and time spent in the ER may be more "costly" to active duty and their families than to other beneficiary groups.

The third item under "services" was "PHARMEXP." On the basis of one-way ANOVA ($F=3.33$, $p<.05$), levels of satisfaction with the pharmacy service were found to vary significantly among beneficiary groups. Once again, active duty family members reported the lowest level of satisfaction while retirees reported the highest. The pharmacy is a "high visibility" service and seems to enjoy a good reputation compared with other military pharmacy services. This assumption was based on the researcher's own dialogue with beneficiaries at KACH and other area military hospitals, anecdotal comments made by beneficiaries in the hospital's generic patient satisfaction survey, and on input from the hospital's patient representative. These factors led to the perception

that beneficiaries might report their highest level of satisfaction with the pharmacy service. It came as some surprise that the mean rating of the pharmacy service ranked eighth out of twelve services and clinics in satisfaction (table 9, page 72).

The fourth item under "services" was "OPREC." On the basis of one-way ANOVA ($F=4.22$, $p<.01$), significant differences in satisfaction with the outpatient records section were found to exist among beneficiary groups (table 5, page 65). Active duty beneficiaries were least satisfied while survivors reported the highest level of satisfaction. Reasons for these differing levels of satisfaction among groups are likely similar to those for other items. Waiting time appears to more of an irritant to active-duty beneficiary groups than to retiree groups. Additionally, as a result of personal observation, it is evident that records are not always sent to clinics prior to the patient's arrival. Conversely, records are not always returned to the outpatient records repository in a timely fashion which results in further frustration to the patient when the record is needed.

The fifth item under "services" was "SATSVC1." On the basis of one-way ANOVA ($F=2.68$, $p<.05$), significant differences in satisfaction with the service most often used were found to exist among beneficiary groups (table 5, page 65). The sixth item under "services" was "SATSVC2." On the basis of one-way ANOVA ($F=2.84$, $p<.05$), significant differences in satisfaction with the second most often used service were also found to exist among groups (table 5, page 65). Active duty reported the lowest level of satisfaction with SATSVC1 while active duty family members reported the lowest level of satisfaction with SATSVC2. Retirees reported the highest levels of satisfaction in both areas.

Availability

The first item included under the market aspect "availability" was "OTHRSERV." On the basis of Chi-Square testing (Chi-Square=13.3, $p<.01$), significant differences of opinion as to whether other services should be offered at KACH were found to exist among beneficiary groups (table 6, page 67). Seventy-four percent of retiree family members and 64% of survivor

beneficiaries indicated other services should be initiated while only about half of other beneficiary groups expressed the need for other services (table 6, page 67). The tendency for retiree family members and survivors to indicate more often that other services are needed is almost certainly a reflection of these groups' more specialized health care needs. These might include services such as cardiology and neurology.

The second item included under the market aspect "availability" was "INPPSYCH." On the basis of Chi-Square testing (Chi-Square=15.8, $p<.01$), significant differences of opinion as to whether inpatient psychiatric care should be initiated were found to exist among beneficiary groups (table 6, page 67). Support for the initiation of inpatient psychiatric care was strongest among retiree and survivor groups and weakest among active duty and active duty family member beneficiary groups. It was expected that widespread support would be found among beneficiaries for the initiation of inpatient psychiatric care was verified by actual findings. Even so, support for inpatient psychiatric care was not as high as it was

anticipated to be. This may be due to a negative connotation associated with psychiatric care in general. Additionally, it is possible that many beneficiaries regard the provision of psychiatric care as less important than the provision of other services. Another possible explanation for differences between groups is that when active duty members require hospitalization for mental illness, they are almost always admitted to WRAMC. Retirees and retiree family members are almost always admitted to civilian facilities under the provisions of the Civilian Health and Medical Plan of the Uniformed Services (CHAMPUS), when they require inpatient psychiatric care. Charges to CHAMPUS inpatients which exceed "CHAMPUS allowable" may cause retiree beneficiaries to support inpatient psychiatric care at KACH because they would pay only the subsistence charge as an inpatient at a military hospital.

The third item included under the market aspect "availability" was "OBCARE." On the basis of Chi-Square testing, significant differences of opinion as to whether full OB care should be restored at KACH were **not** found to exist among beneficiary groups

(table 6, page 67). Clearly, most members of all beneficiary groups support the restoration of full obstetrical care including labor and delivery services.

The fourth item included under the market aspect "availability" was "SVCUNAVL." On the basis of Chi-Square testing (Chi-Square=18.6, $p<.01$), significant differences of opinion as to whether needed services are unavailable were found to exist among beneficiary groups (table 6, page 67). Retiree beneficiary groups reported most frequently that certain services were unavailable at KACH. Typically, comments referred to the lack of specialty care at KACH such as cardio-thoracic and oncology services. Active duty beneficiaries most frequently reported that services they needed were available. Naturally, the absence of some specialty services at KACH means that those in need of them must go to WRAMC or the National Naval Medical Center at Bethesda. Because active duty and active duty family members typically require less specialized care than older beneficiaries, it is no surprise that older beneficiaries more often report that needed services are unavailable at KACH.

Access

Three items were included under the market aspect "access." These included "YOURNEED," "FAMNEED," and "ACCESS." On the basis of separate Chi-Square testing of all three items, significant differences among groups were **not** found to exist for any of the three items (table 7, page 69).

Almost two-thirds of beneficiaries overall reported that their needs and the needs of their families were met at KACH. While slightly over a third of beneficiaries report their healthcare needs and the healthcare needs of their families are not met, it is possible that these unmet needs are related to the absence of specialized services not offered by KACH. In some cases, anecdotal comments from respondents indicated they felt that their needs or the needs of family members were not met due to a poor care encounter.

Because a large portion of the complaints received by the KACH patient representative concern the difficulty of getting an appointment, it was thought that most beneficiaries would characterize KACH services as "inaccessible." However, this was

not verified by actual findings. In fact, more than three-fifths of respondents indicated they felt KACH services were accessible. Retiree beneficiaries most often reported that care was not accessible to them. Overall though, 62% (table 7, page 69) of respondents indicated they felt KACH services were accessible. Written comments from many respondents indicated that they could gain access to care at KACH, but only after enduring the arduous process of getting an appointment and waiting to be seen in the clinic.

Other

The first item included under the market aspect "other" was "COURTRES." On the basis of one-way ANOVA ($F=5.39$, $p<.01$), significant differences with regard to courtesy and respect experienced at KACH were found to exist among beneficiary groups (table 8, page 71). Active duty groups reported the lowest levels of satisfaction with courtesy and respect experienced at KACH. Retirees report the highest level of satisfaction with courtesy and respect experienced. It is possible that active duty beneficiary groups more often approach the care encounter with less "tolerance" for hospital staff who are less than

totally courteous and respectful. Active duty and active duty family members frequently have to bring children to the hospital with them and may have less time to allocate to the care encounter. Retiree beneficiary groups, on the other hand, may be less likely to have children with them, and typically may be able to allocate more time to the care encounter. In essence, younger beneficiaries may bring more stressors into the care encounter than do older beneficiaries; hence they may perceive a particular staff member to be discourteous or disrespectful more readily than might an older beneficiary.

The second item included under the market aspect "other" was "PROVCOMP." On the basis of one-way ANOVA ($F=6.29$, $p<.01$), significant differences in the level of perceived provider competence were found to exist among beneficiary groups. Retirees reported the highest level of satisfaction with provider competence. Written comments provided at least one compelling explanation for these findings. Retiree beneficiaries utilize the internal medicine clinic more frequently than any other clinic. Not only did beneficiaries report a high level of satisfaction with

the internal medicine clinic (table 9, page 72), but repeatedly singled out three internal medicine physicians for consistently high praise. Because these providers account for much of the retiree beneficiaries' experience with KACH, their reported level of satisfaction comes as no surprise. These findings pertaining to courtesy and provider competence compare favorably with the work of authors cited in the literature review. Hall and Dornan (1988), for example, found that the facets most likely to elicit a patient's satisfaction with health care were humaneness and technical ability. Additionally, while it is possible some respondents possessed the medical expertise to assess medical competence, it is unlikely many, if any, did. This supports previous findings in the literature (Buchan and Hill, 1990; Cunningham, 1990). Lastly, differences among groups with regard to provider competence, combined with specific patient comments, suggest that customers do make judgments on the basis of non-technical factors surrounding the care encounter (Sweeney, 1987).

The third item included under the market aspect "other," was "KACHCOMM." On the basis of one-way

ANOVA ($F=3.28$, $p<.05$), significant differences in satisfaction with KACH communication with beneficiaries were found to exist among beneficiary groups (table 8, page 71). Survivors and retirees reported the highest level of satisfaction with communication while active duty family members reported the lowest. The overall satisfaction level of 2.62, combined with anecdotal comments received on surveys indicate that beneficiaries are somewhat dissatisfied with the way KACH communicates with beneficiaries. Because the hospital tends to rely heavily on the installation newspaper for publicity, those beneficiaries who do not have access to the paper could easily feel as if the hospital does little in the way of effective communication with beneficiaries. Some respondents offered written comments alluding to "the reputation" of KACH. This reference to "reputation" supports other work which found that consumers rely on sources such as friends and relatives as their main source of healthcare information (Christensen and Inguanzo, 1989). Because poor experiences are more likely to be passed along than good ones, it seems increasingly important that

the hospital seek to communicate its reputation directly to the beneficiary.

V. Conclusions and Recommendations

Future Research

Significant opportunity exists for further research in this area. First, this study might be re-visited at a certain interval to assess the effects of any intervention made. The information derived from the study's application in this setting might also be useful in other organizations. A third option would be to administer the survey instrument used in this study to KACH staff. Responses from beneficiaries and staff could then be compared. In particular, statistically significant differences in the perceptions of beneficiaries and hospital staff could be examined.

One weakness of this study which should be addressed in future research concerning military beneficiaries was the over and under sampling of some groups. In order to avoid this in future research, the researcher should over-sample the active-duty

family member beneficiary by a significant amount so that the composition of the respondents more closely resembles that of the population.

Recommendations

The results of this study provide a body of organizational knowledge concerning beneficiary wants, needs, and desires. The specific information it reveals about differences between beneficiary groups regarding support for new services and satisfaction with existing ones provides some basis for the organization's strategic direction. Should the hospital elect to restore full obstetrical care, it could expect widespread support among all beneficiary groups. Similar support could be expected, particularly among older beneficiaries, for the initiation of inpatient psychiatric care.

Where the hospital's strategic plan addresses specific plans to improve satisfaction, efforts should be concentrated on those services and clinics with which beneficiaries appear to be least satisfied. Specifically, respondents report that they are most satisfied with the eye, ear, nose and throat clinic and least satisfied with the emergency room

service (table 9, page 72). For this reason, efforts to improve satisfaction should focus first on emergency services. In fairness, it must be pointed that at the time this study was conducted, the emergency room was located in cramped temporary quarters while the original location underwent renovation. The extent to which this condition may have influenced responses is not known.

Perhaps the most revealing result of this study is that **not all beneficiaries think alike.** This is highly consistent with previously cited literature which points up the importance of segmenting the market and sensing needs of different consumer groups (Blonna, Broadbent, and King, 1991). The actual findings of this study provide strong evidence that real differences exist in the way beneficiary groups assess their satisfaction with the care they receive at KACH. In particular, where differences exist among groups, active duty and active duty beneficiaries tend to be the least satisfied groups. Any effort to improve existing services or introduce new ones that fails to recognize these differences will be, at best, less than successful, and at worst, a failure.

Efforts devoted to improving existing services should be geared toward beneficiary groups that are least satisfied with them.

Clearly, the information derived from this study cannot serve as the sole basis for strategic planning at KACH. Utilized in combination with information from other internal and external sources however, the results of this study can help to provide the basis for solid strategic planning for the near future at Kimbrough Army Community Hospital.

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EXHIBIT 1

SURVEY INSTRUMENT

BENEFICIARY SURVEY

I. Demographic Data

Please complete the following statements as they apply to you by circling the number corresponding to your response or filling in the blank.

1. My Beneficiary Status is: (circle one)

1) Active Duty	4) Retiree Family Member
2) Active Duty Family Member	5) Survivor
3) Retiree	6) Other

(2-4) Within the last two years have you: (circle yes or no)

2. been treated as an outpatient at KACH?	1) yes	2) no
3. been treated as an inpatient at KACH?	1) yes	2) no
4. sought care elsewhere?	1) yes	2) no

5. I have lived in the Ft Meade area for _____ years and _____ months.

6. It takes about _____ minutes to drive from my home to KACH.

7. My education level is:

1) some high school	4) college graduate
2) high school graduate/GED	5) some graduate work
3) some college/assoc degree	6) graduate degree

8. I am: 1) male 2) female

9. I am _____ years old

II. Participant's Opinion

Please answer the following questions to the best of your ability by circling the number corresponding to your response, and/or answering the question in the space provided. If you need more room for your answers or comments, please use the last page for continuation.

10. Overall, how would you rate the care you receive at KACH?

1) excellent 2) good 3) satisfactory
4) unsatisfactory 5) poor 6) have not used KACH

If unsatisfactory or poor, why?_____

_____

_____

11. Do services at KACH meet **your** needs? 1) yes 2) no

If not, why? _____

_____

_____

12. Do services at KACH meet the needs of **your family?**

1) yes 2) no

If not, why? _____

_____

_____

13. Should KACH provide services other than those currently offered?

1) yes 2) no

If yes, what services? _____

_____

_____

14. Do you or your family avoid using KACH services?

1) yes 2) no

If yes, why? _____

_____

_____

15. In terms of courtesy and respect, how would you rate the way you are treated by staff when you come to KACH for care?

1) excellent 2) good 3) satisfactory
4) unsatisfactory 5) poor

If courtesy and respect are less than satisfactory, in

what way?_____

_____

_____

16. How would you rate the competence of providers (doctors and nursing staff) at KACH?

1) excellent 2) good 3) satisfactory
4) unsatisfactory 5) poor

If unsatisfactory or poor, why?_____

_____

_____

17. If you have used the Emergency Room, or taken a child to the KACH Emergency Room in the last two years, how would you rate your experience?

1) excellent 2) good 3) satisfactory
4) unsatisfactory 5) poor

17 (Cont) If your experience in the KACH Emergency Room was less than satisfactory, why? _____

_____

_____ _____

18. If you have used the KACH Pharmacy Service within the last two years, how would you rate your experience?

1) excellent 2) good 3) satisfactory
4) unsatisfactory 5) poor

If your experience with the KACH Pharmacy was less than satisfactory, why? _____

_____

_____

19. If you have used the KACH Outpatient Medical Records Section within the last two years, how would you rate your experience?

1) excellent 2) good 3) satisfactory
4) unsatisfactory 5) poor

If your experience was less than satisfactory, why? _____

_____

_____

20. Considering clinic hours and waiting times for appointments, do you feel that KACH services are accessible to you and your family?

1) yes 2) no

If no, why not? _____

_____

_____

(21-22) Do you feel that KACH should provide:

21. Inpatient psychiatric care? 1) yes 2) no

22. Full obstetrical care? (birthing center) 1) yes 2) no

23. Are there services which are unavailable at KACH for which you must rely on CHAMPUS or another military facility?

1) yes 2) no

What services? _____

_____

_____

24. In your opinion, how well do we at KACH communicate with you, the community we serve?

1) communication is excellent 2) communication is good
3) communication is satisfactory 4) communication is unsatisfactory
5) communication is poor

If communication is less than satisfactory how might KACH communicate more effectively with you? _____

_____

_____

25. What KACH clinics (General Outpatient, Pediatrics, Internal Medicine etc.) and services (Radiology, Laboratory, etc.) do you use and how would you rate your overall experience in these clinics or services? (Please list the two you visit most often.)

My experience in the _____ clinic/service has been:

1) excellent
2) good
3) satisfactory
4) unsatisfactory
5) poor

My experience in the _____ clinic/service has been:

1) excellent
2) good
3) satisfactory
4) unsatisfactory
5) poor

If your experience(s) was/were less than satisfactory, why?

_____

_____

26. What do you like most about KACH, and why? _____

_____

_____

27. What do you like least about KACH and why? _____

_____

_____

28. In order to simplify follow-up and clarification, please provide your name and a daytime phone number. This is completely voluntary but will help ensure your views are well represented in this study.

Name: _____

Telephone (Please include area code):(___)_____

29. Please use the remaining space to continue answering questions or to discuss other aspects of the operation of KACH that you feel should be addressed.

_____

_____

_____

_____

_____

TABLE 1

Beneficiary Subgroup Representation;
Population and Sample

BENEFICIARY SUBGROUP	POPULATION (N=56,001)		MAIL-OUT SAMPLE (N=1560)		RETURNS (N=366)	
	N	%	N	%	N	%
ACTIVE DUTY	10,696	19.1	298	19.1	74	20.2
ACTIVE DUTY FAMILY MEMBER	19,657	35.1	547	35.1	74	20.2
RETIREE	9,744	17.4	271	17.4	97	26.5
RETIREE FAMILY MEMBER	13,664	24.4	381	24.4	100	27.3
SURVIVOR	2,240	4.0	63	4.0	21	5.8
TOTAL	56,001	100.0	1560	100.0	366	100.0

TABLE 2

Variable Listing

VARIABLE	DESCRIPTION	SURVEY ITEM #	SCALE TYPE
	DEMOGRAPHICS		
STATUS	Beneficiary Status	1	
OUT2YR	KACH outpatient within last 2 years?	2	
IN2YR	KACH inpatient within last 2 years?	3	
CIV2YR	Sought civilian care within last 2 years?	4	
MEADEYRS	Number of years lived in Fort Meade area	5	
DRIVTIME	Number of minutes drive to KACH	6	
EDLEVEL	Educational level	7	
GENDER	Gender	8	
AGE	Age	9	
	OVERALL SATISFACTION WITH CARE		
OVRLCARE	Satisfaction with overall care	10	1-5

Table 2 (Cont)

VARIABLE	DESCRIPTION	SURVEY ITEM #	SCALE TYPE
	SATISFACTION WITH **SERVICES**		
AVOIDKIM	Do you avoid KACH?	14	1-0
EREXP	Satisfaction with ER	17	1-5
PHARMEXP	Satisfaction with pharmacy	18	1-5
OPRECEXP	Satisfaction with outpatient records	19	1-5
SATSVC1	Satisfaction with CLINSVC1	26	1-5
SATSVC2	Satisfaction with CLINSVC2	28	1-5
	SATISFACTION WITH **AVAILABILITY** OF SERVICES		
OTHRSRV	Should KACH provide other services?	13	1-0
INPPSYCH	Support inpatient psychiatric care at KACH?	21	1-0
OBSTCARE	Support full obstetrical care at KACH?	22	1-0
SVCUNAVL	Are needed services unavailable?	23	1-0

Table 2 (Cont)

VARIABLE	DESCRIPTION	SURVEY ITEM #	SCALE TYPE
	SATISFACTION WITH **ACCESS** TO CARE		
YOURNEED	Were your healthcare needs met?	11	1-0
FAMNEED	Were healthcare needs of your family met?	12	1-0
ACCESS	Are KACH services accessible to you and your family?	20	1-0
	OTHER: COMPETENCE, COURTESY AND COMMUNICATION		
COURTRES	Satisfaction with KACH courtesy and respect	15	1-5
PROVCOMP	Satisfaction with provider competence	16	1-5
KACHCOMM	How well does KACH communicate with you?	24	1-5

TABLE 3

DESCRIPTIVE STATISTICS FOR SAMPLE

Survey Item #		% YES	% NO	MEAN	S.D
2)	OUT2YR	59.3	40.7	-	-
3)	IN2YR	8.5	91.5	-	-
4)	CIV2YR	60.7	39.3	-	-
5)	MEADEYRS			11.72	12.16
6)	DRIVTIME			20.50	13.32
9)	AGE			47.41	17.43

7) EDLEVEL*	%
SOME HIGH SCHOOL	3.4
HIGH SCHOOL GRADUATE	21.6
SOME COLLEGE/ASSOC DEGREE	36.9
COLLEGE GRADUATE	12.3
SOME GRADUATE WORK	5.5
GRADUATE DEGREE	18.6
MISSING	2.5

8) GENDER**	%
MALE	39.6
FEMALE	60.4

* EDLEVEL - 9 Missing
** GENDER - 2 Missing

TABLE 4

Descriptive Statistics: **OVERALL CARE**

(Overall Satisfaction with care)

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	68	66	59	67	16	276	5.84* p<.01
MEAN	2.66	2.77	1.97	2.15	2.63	2.41	
S.D.	1.25	1.08	1.14	1.04	1.20	1.16	

* statistically significant, $\alpha<.05$

TABLE 5

Descriptive Statistics: **SERVICES**

(Satisfaction with Services)

AVOIDKIM

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	TOTAL	CHI SQUARE
YES	31	37	29	32	8	137	3.61 N.S
NO	39	33	45	49	11	177	
TOTAL	70	70	74	81	19	314	
% YES	44	52	39	39	44	44	

EREXP

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	52	53	40	44	13	202	8.53* P<.01
MEAN	3.17	3.51	2.05	2.73	2.62	2.90	
S.D.	1.31	1.28	1.13	1.35	1.12	1.36	

PHARMEXP

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	61	60	41	68	14	253	3.33* P<.05
MEAN	2.34	2.60	1.94	2.18	1.79	2.24	
S.D.	1.03	1.21	1.09	1.11	.80	1.12	

* statistically significant, $\alpha<.05$

TABLE 5 (Cont)

SERVICES

OPREC

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	51	54	41	54	10	210	4.22* P<.01
MEAN	2.53	2.48	1.78	2.26	1.70	2.26	
S.D.	1.14	1.02	1.08	1.05	.67	1.09	

SATSVC1

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	61	63	45	59	12	240	2.68* P<.05
MEAN	2.33	2.22	1.69	2.05	2.0	2.41	
S.D.	1.14	1.04	1.02	1.01	1.13	1.16	

SATSVC2

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	47	53	28	44	4	176	2.84* P<.05
MEAN	2.25	2.57	1.64	2.25	2.0	2.24	
S.D.	1.09	1.29	.95	1.24	1.41	1.21	

* statistically significant, $\alpha<.05$

TABLE 6

Descriptive Statistics: **AVAILABILITY**

Satisfaction with Availability of Services

OTHRSERV

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	22	26	21	39	7	115	13.3* P<.01
NO	33	23	23	14	5	98	
TOTAL	55	49	44	53	12	213	
% YES	.40	.53	.48	.74	.64	.54	

INPPSYCH

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	25	29	26	41	12	133	15.8* P<.01
NO	28	29	13	16	1	87	
TOTAL	53	58	39	57	13	220	
% YES	47	50	67	72	92	60	

* statistically significant, $\alpha<.05$

TABLE 6 (Cont)

AVAILABILITY

OBCARE

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	48	54	34	47	14	197	7.06 N.S
NO	13	12	8	4	0	37	
TOTAL	61	66	42	51	14	234	
% YES	79	82	81	92	100	84	

SVCUNAVL

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	25	25	28	46	8	132	18.6* P<.01
NO	31	35	20	15	3	104	
TOTAL	56	60	48	61	11	236	
% YES	45	42	58	75	73	56	

* statistically significant, $\alpha<.05$

TABLE 7

Descriptive Statistics: **ACCESS**

Satisfaction with access to care

YOURNEED

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	45	46	37	48	11	187	.329 N.S.
NO	24	23	22	26	7	102	
TOTAL	69	69	59	74	18	289	
% YES	65	67	63	65	59	65	

FAMNEED

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	32	46	34	43	12	167	7.02 N.S.
NO	29	21	22	27	2	101	
TOTAL	61	67	56	70	14	268	
% YES	52	69	61	61	85	62	

* statistically significant, $\alpha<.05$

Table 7 (Cont)

ACCESS

ACCESS

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	CHI SQUARE
YES	40	39	33	37	12	161	3.00 N.S.
NO	22	26	16	29	4	97	
TOTAL	62	65	49	66	16	258	
% YES	64	60	67	56	75	62	

* statistically significant, $\alpha<.05$

TABLE 8

Descriptive Statistics: **OTHER**

Satisfaction with provider competence, courtesy, respect and communication

COURTRES

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	70	68	59	76	18	292	5.39* P<.01
MEAN	2.51	2.69	1.83	2.29	2.11	2.90	
S.D.	1.30	1.05	1.10	1.07	.76	1.36	

PROVCOMP

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	68	63	57	71	17	276	6.29* P<.01
MEAN	2.44	2.62	1.72	2.22	2.12	2.24	
S.D.	.99	1.11	1.06	1.00	.70	1.06	

KACHCOMM

	ACTIVE DUTY	ACT DTY FAM MBR	RETIREE	RETIREE FAM MBR	SURV	OVERALL	F STAT
N	58	60	56	62	14	251	3.28* P<.05
MEAN	2.65	2.97	2.29	2.66	2.14	2.62	
S.D.	.98	1.13	1.25	1.19	.95	1.15	

* statistically significant, $\alpha<.05$

TABLE 9

Mean Satisfaction Ratings for Clinics/Services

Value Labels

1) excellent	4) unsatisfactory
2) good	5) poor
3) satisfactory	

Ranking	Clinic/Service	* Number of Valid Cases	Mean Rating
1)	Eye, Ear Nose & Throat	13	1.22
2)	Physical Therapy	15	1.73
3)	Dermatology	13	1.85
4)	Internal Medicine	38	1.89
5)	Laboratory	56	1.96
6)	Radiology	35	2.02
7)	Obstetrics & Gynecology	35	2.14
8)	+ Pharmacy	255	2.25
9)	+ Outpatient Records	211	2.26
10)	General Outpatient Clinic	97	2.43
11)	Pediatrics	33	2.56
12)	+ Emergency Room	221	2.90

* clinics/services with fewer than 10 valid cases were excluded.

+ ratings for these clinics/services are the result of specific survey items **and** survey item 25. All other ratings are the result of responses only to survey item 25.