AU/ACSC/064/1999-04

AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

LEADERSHIP IMPLICATIONS OF THE ANNUAL PATIENT CARE SURVEY

by

Kevin W. Glasz, USAF, MSC, CHE

In Partial Fulfillment of the Graduation Requirements

Advisor: Major (Dr.) Marlin Moore, USAF, BSC

Maxwell Air Force Base, Alabama

April 1999

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Preface

The issue of patient satisfaction is tremendously important. To senior Air Force leaders, patient satisfaction derives importance from the perception of the healthcare benefit by all those entitled to receive it, doubly true for those who have not yet chosen the military as a career. Perhaps a case can be made that patient satisfaction is important to those considering the military as a way of life. To senior leaders in the military healthcare system, patient satisfaction is important because they have been charged with delivery of quality healthcare to all eligible beneficiaries. Patient satisfaction is important to wing, MAJCOM, and combatant commanders because they want to see their troops happy with benefits of military service. It is important to military treatment facility commanders because satisfied patients are a mark of achievement all should strive for. Finally, patients want to have a satisfying experience with the care they are provided as part of their benefits package.

I wish to thank the librarians of the Maxwell AFB Fairchild Library for their assistance at securing materials not available in the library. I greatly appreciate the advice and guidance expressed by various members of the Air Command and Staff College, most notably Majors Marlin Moore, Cindy Miller, and Connie Rocco.

AU/ACSC/064/1999-04

Abstract

This research paper looks at the issue of patient satisfaction from the civilian healthcare perspective and from the military perspective. The hypothesis of this study is that indicators of patient satisfaction in the military healthcare system and indicators of patient satisfaction in the non-military healthcare sector are similar. This study used logistic regression to analyze military patient satisfaction. The analysis used the 1997 Health Care Survey of DoD Beneficiaries Form A (for adults) dataset which is maintained by the TRICARE Management Activity of the Office of the Assistant Secretary of Defense for Health Affairs. These survey data suggest that a strong similarity exists between indictors of patient satisfaction in the non-military and military healthcare sectors. Thus, military leaders can productively use the body of knowledge and experience gained from the civilian sector when making decisions about military health care. Patient satisfaction must be an area of concern for military healthcare leaders at all levels.

Chapter 1

Introduction

> *I've told my kids they're not allowed to get sick when we go to Grandma's house…They're not allowed to get sick when we go on vacation from here on out.*
>
> --Jennifer Anderson[1]

> *We have to make sure that we are not satisfied with standards that only address 75 percent of satisfaction. That's not going to cut it in today's Army. Our soldiers are entitled to better than 25 percent failure.*[2]
>
> General Dennis Reimer
> Chief of Staff, United States Army

The issue of patient satisfaction has never been so important and so desirous to the leaders of the United States Military Services as it is now. Resources to provide healthcare to military members and other eligible beneficiaries have been strained by the increasing cost of providing healthcare. Medical treatment facility budgets are shrinking and staffs are being reduced as we absorb the impact of reductions in force along with the rest of the military services. In the past, free healthcare for life for the member and their families was a major benefit touted by recruiters and commanders as they tried to entice people to serve or continue serving their country. Today access to the military healthcare system is not seen as the benefit it once was, and with experiences like those of Ms Anderson (who spent 3 days trying to find a TRICARE provider, who feared she would

not be reimbursed if she sought care in the emergency room), who can blame our beneficiaries for feeling that way?

The Call for Patient Satisfaction

The service Surgeons General have placed a high priority on patient satisfaction. Lt. General (Dr.) Charles Roadman has established 6 goals for the United States Air Force Medical Service[3]. Goal 5 calls for creating and maintaining a responsive and sensitive healthcare atmosphere for our patients. In fact, since becoming Surgeon General for the United States Air Force he has continually briefed his model outlining the strategic initiatives of the Air Force medical service; indeed, he has gone further and expected that the model be shown in each medical service briefing with a clear tie between the briefing and the strategic initiatives of the medical service model. In the model, shown at Figure 1, patient satisfaction is seen as the roof of a parthenon resting upon four pillars. The importance of patient satisfaction in the provision of medical care is a high priority.

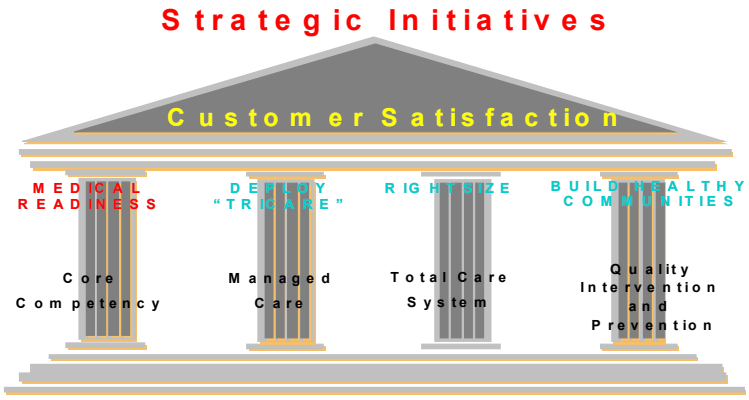

Figure 1. Air Force Surgeon General's Parthenon Concept

The United States Army Surgeon General, Lt. General (Dr.) Ronald R. Blanck has clearly espoused the principles of patient satisfaction in his 1998 strategic vision statement. The first core value listed in the document calls for absolute patient focus. In the United States Army Medical Service strategic vision he describes his desire for creating a "world class system of choice" and calls for "patient focused care" while calling on his medics to be an "advocate for patient needs."[4] In addition, he calls for healthcare that is accessible to the Army family by "being easily obtained by all eligible beneficiaries in the right clinic setting in a timely manner."[5]

Not to be outdone on the issue of patient satisfaction, Vice Admiral (Dr.) Dick Nelson of the United States Navy recently held a Surgeon General's conference in Norfolk where he introduced a new strategy for Navy medicine. One of the two new goals introduced is to "communicate the benefit and education beneficiaries."[6] Three of the key elements found in the Navy Medicine Customer Relations Toolkit for Leaders that are considered essential for service excellence include: standards of excellence, metrics, and continuous quality improvement. As indicated in the document, the idea is to get Navy medical leaders at all levels focusing on elements of customer service, thereby improving overall service to beneficiaries.

Statement of the Research Question

The research conducted for this paper is intentionally broad based and is exploratory in nature. For the purposes of this paper, the thesis is that the military healthcare system is experiencing similar, if not the same, problem areas with respect to patient satisfaction as the non-federal healthcare sector. Logically then, the null hypothesis is that the problem areas with respect to patient satisfaction in the military healthcare system and

the nonfederal healthcare system are fundamentally different. Although the correlational nature of this study will not allow causal links to be established, this type of analysis can suggest plausible courses of action by the military leader. Therefore, this study will focus on the overall similarity, or lack thereof, with respect to published findings as a result of research conducted on patient satisfaction surveys.

There are many databases available for ascertaining patient satisfaction with the care they have received. In addition to the multitude of local surveys done within each of the medical treatment facilities, the Office of the Assistant Secretary of Defense, TRICARE Management Activity has a program review and analysis office (OASD TMA/PRE) that administers several different "official" patient survey instruments designed to gather insight into the satisfaction of DoD healthcare beneficiaries.

The 1997 Health Care Survey of DoD Beneficiaries Form A (for adults) is an ideal survey instrument for exploratory analysis. Some of the questions I intend to answer with this survey data set are as follows. Where do our patients suggest that we are "hitting the mark" with respect to patient satisfaction? According to our patients, where is it that we are "missing the mark?" After analysis of the beneficiary survey data for significant findings, I hope to identify areas for concentration (or at least areas recommended for further research) of our patient satisfaction efforts. In addition, I will perform a literature review to see if there are any lessons "from the field" that can be used by our healthcare leaders to create a satisfied patient population. It is these lessons "from the field" that will be used as surrogate measures of similarity which will be used to test the hypothesis that military and civilian populations are experiencing substantially

similar problem areas with respect to self reported patient satisfaction with the healthcare they receive.

Notes

[1] Funk, Deborah. "The Trouble With TRICARE." Air Force Times, February 1, 1999, 12-14.

[2] Gillert, Douglas J. "Reimer Challenges Medics to Get TRICARE Right." American Forces Press Service. General Reimer's speech 1 Feb 99 at the annual TRICARE conference. HTTP://www.dtic.mil/afps/news/9902023.html, February 9, 1999.

[3] The United States Air Force Medical Service, AF Medical Service Goals. HTTP://sg-www.satx.disa.mil/af/sg/businesstools/goals/index.cfm, February 9, 1999.

[4] Blanck, Ronald R. US Army Surgeon General's 1998 Strategic Vision. HTTP://140.139.13.36/armymed/default2.htm, February 9, 1999

[5] IBID

[6] Navy Medicine Customer Relations Toolkit for Leaders. HTTP://nmimc_bumed_web.med.navy.mil/toolkit/sgmessge.htm, February 9, 1999.

Chapter 2

Problem Background and Significance

> *In the Navy as well, health care is a topic more conspicuous than ever before. Quality of life issues –with their profound impact on retention—occupy the close attention of Navy leadership. Health care is one of the hottest quality of life issues. More so now than in the past, Sailors and their families are better informed about their health care benefits. They are a generally savvy bunch, these Sailors. So savvy, in fact, that they're paying more attention to the economics of retirement, in which health care is a significant factor. Sailors might not know the exact dollar value of their retirement health care, but the certainly weigh its value, when assessing their re-enlistment options and future retirement compensation.*[1]
>
> —Admiral J. Paul Reason
> Commander in Chief, United States Atlantic Fleet

Patient satisfaction is more important now than ever before.[2,3] Military healthcare was once perceived as a fantastic benefit by service members and may have been partly responsible for higher retention rates (in past years) and happiness with military service and the benefits offered for continued service.[4] Unfortunately, times have changed for the military medical profession and many service members now scrutinize their healthcare benefit.[5] Perhaps patients are less satisfied with the care they are receiving today than they were with care they received in the past. The important fact is that now patient satisfaction is a matter of focus for our senior service leaders, and consequently, must be a matter of focus for military healthcare leaders at all levels. Is this challenge purely for military healthcare leaders, or are non-military healthcare leaders being faced with similar problems and challenges?

The emphasis must be on the healthcare system, and not just on those directly providing care. For example, for most patients their first access to the system is through the appointment desk. One might imagine how overall patient satisfaction is impacted by hearing that all available appointments are taken and that the patient should try back on the first Monday of the next month. This patient is probably not satisfied with the system and has yet to be seen. Imagine that patients frame of mind if given a selection of appointment dates in the not too distant future. Keep in mind that often the patient's final experience with a given treatment experience is with either the pharmacy, or the appointment system as they make their follow-up appointment. Medical treatment facility leaders that think expanding the pharmacy waiting room so patients can be more comfortable as they wait are probably missing the mark. If the patient did not have to wait they would not need such a large waiting room to begin with. Perhaps the better solution is to spend resources in a manner that will improve the speed of prescription filling. In most facilities we have eliminated some of that time by creating a system for the provider to electronically send the prescription to the pharmacy before the patient even leaves the exam room area. Hypothetically speaking, it might be that the first and last interaction with the system can characterize the whole episode of care, regardless of how the interim steps were handled (unless something relatively significant occurred).

Perhaps not a healthcare example, but none-the-less, something we can learn from is a business practice at Wal-Mart. As you enter and exit the store you have the opportunity to purchase a canned soda (granted, it is Sam's Choice Cola and not Coca-Cola or Pepsi Cola) for the low price of one dime or one quarter. As I see it, the intent is for the customer to see this good deal and have a favorable impression upon entering and leaving

the store – that is the impression Wal-Mart leaders want their customers to leave with. Why can't we do that in military healthcare? According to Dr. (Lt. Gen.) Charles Roadman, Air Force Surgeon General, "The end I mind ought to be where we have a patient population that says, 'I cannot imagine having to go to any other health care system, because I know I won't get the caring and the care that I get in the Military Health System.'"[6] With patient satisfaction clearly stated as a goal of the senior military Surgeons General, and if our patients are experiencing similar problem areas as those in the non-military healthcare sector, then we may be able to use the non-military healthcare experience in part to help us achieve our goals. I am not suggesting that we rest on our laurels while the non-military healthcare sector solves our problems, I am merely suggesting that current military healthcare leaders can benefit from the experiences of others and focus energy on gaining and maintaining a competitive advantage.

Much of the care patients formerly received in a military treatment facility is now being conducted at civilian facilities and in many cases comes at some financial (and psychological) expense to the service member or their family.[7] TRICARE is the way the DOD has chosen to meet the healthcare needs of service members and other eligible beneficiaries. It is intuitively obvious that patient satisfaction is important, whether in the direct care of the military treatment facility or for care received through TRICARE. To the patient, all care received is part of the military healthcare experience. In other words, whether the care is received in the direct care system with a military provider or contracted through a TRICARE contract provider, the military healthcare system receives the credit, or if something goes wrong, receives the blame. For the purposes of this paper, however, the focus will be on satisfaction with care received at military treatment

facilities. It should be noted though, that the survey instrument used to conduct the data analysis for this study contains information that might potentially address the "civilian experience" issue.

As a support function of the United States Air Force and the other military services, we must do our part to make the benefits package attractive to service members. We must always be mindful that satisfaction occurs in their eyes and we must take care to measure what they believe quality care is, or what they measure/base their level of satisfaction upon. Often times our idea of quality indicators are metrics such as percentage of readmission's or percentage of RNs on staff vs. LPNs. Perhaps these are valid indicators associated with clinical quality of care, but they may, or may not be, what the patient is interested in. I would suggest that we need to ensure that we track indicators that are reflective of, and truly measure patient satisfaction. Validity of such indicators as measures of patient satisfaction are beyond the scope of this paper. There are many other reasons to satisfy our patients, but in order to satisfy them, we need to understand what we are doing right and what we need to be doing better.

Notes

[1] Reason, J. Paul. Keynote Address Navy Surgeon General's Conference, Plenary Session 1, 23 September 1998, Waterside Marriott Hotel, Norfolk, Virginia. HTTP://navymedicine.med.navy.mil, February 9, 1999.

[2] IBID.

[3] Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[4] IBID, Reason.

[5] IBID, Reason.

[6] Roadman, Charles II, as found in "DoD Needs 'Different Kind' of Health Care, Leader Says" by Douglas J. Gillert, American Forces Press Service. HTTP://www.defenselink.mil/news/Feb1999/n02091999_9902092.html, March 21, 1999.

Notes

[7] IBID, Funk. Ms Anderson was required to pay "out of pocket" for a prescription for her son. As part of the TRICARE program, some treatments may cause the patient to incur healthcare expense for which they are personally liable.

Chapter 3

Literature Review

A literature review is important to this study for two main reasons. First, a literature review will suggest methods of analysis for analyzing patient satisfaction data like those used in this study. Secondly, and perhaps more importantly, a review of literature will give us an idea of the types of patient satisfaction-related problems experienced by those in the non-military healthcare sector. If their findings are similar to those identified in this study, then military healthcare leaders may be able to use some of the lessons "from the field" instead of tacking such issues as if they were new to healthcare. This chapter is divided into two parts, one to looks for appropriate statistical tools and techniques for analyzing patient satisfaction and determining relevant problem areas, and the other to primarily look at potential problem areas identified within the current body of knowledge.

Statistical Techniques Used To Analyze Patient Satisfaction

In a study that compared mail-back questionnaires and telephone survey results,[1] Melvin Hall found that mail-back questionnaires generated a wider range of responses, and thus tended to minimize the "acquiescence bias" telephone interviews tend to elicit. He basically noted three findings after conducting his research[2]:

1. "Hospital patients contacted by telephone are less inclined to criticize a hospital than those who respond to a self-administered questionnaire."
2. "Administrators need to know the negative evaluations in order to address the system which produces them."
3. "Self-administered questionnaires are less costly than telephone interviews for conducting patient satisfaction surveys."

These findings are especially relevant to the healthcare setting as indicated. The DoD (Health Affairs) TRICARE Management Activity also conducts phone surveys to elicit responses just after a patient visit is encountered. For the purposes of this study, it is comforting to note that the range of responses may be somewhat greater than that which would be encountered using telephone survey data. One issue, not particularly addressed in Hall's study is the effect of time on the response. For example, a patient could have a particularly pleasing encounter, but if asked to recall the encounter several months later, the level of satisfaction might be somewhat tempered by time between the event and measuring the satisfaction. In the survey used for this study, respondents are asked to provide opinions regarding healthcare received during the past 12 months. A patient may have had multiple visits during the past year or a single visit, which could have occurred anytime during the 12 months preceding survey response. Although categorical data regarding the number of visits during the preceding 12 month period is available within the data base, that information is not incorporated into the exploratory model.

A relatively simple study by Schmittdiel, et al, published in the Journal of the American Medical Association used a logistic regression model and found that patients who selected their own healthcare provider versus those patients who were assigned a healthcare provider were up to 20 percentage points more likely to rate satisfaction with care as either excellent or very good.[3] The authors controlled for characteristics such as

patient demographics, socioeconomic characteristics, health values, health beliefs, and differences in physician demographics and specialty in their study of 10,205 respondents' opinions. This study demonstrates the applicability of logistic regression to healthcare questionnaires and provides some important "lessons learned" for military healthcare leaders who continue to randomly empanel beneficiaries with staff providers.

If simply providing a choice makes a beneficiary more satisfied with care received or even has the potential of increasing satisfaction with the healthcare received, a simple policy change might increase patient satisfaction in the military healthcare system. Interestingly enough, this is one seemingly easy policy that would cost little, if anything, to implement.

In the Schmittdiel, et al, study, as in this study, they compressed the dependent variable responses into a dichotomous form. Their original data contained responses along a 5 point satisfaction scale which they dichotomized as follows: excellent/very good satisfaction vs. all other responses. Their dichotomization differed slightly from the technique used in this study, but logistic regression analysis of the data set was accomplished to draw out significant associations as it is in this study.

Inova Fairfax Hospital and Inova Health System conducted a survey of emergency department patient satisfaction. The survey was initially conducted on more than 3,000 patients, however, in the study, only 100 patients per quarter were surveyed. Logistic analysis performed on the data identified 14 areas of more important/key attributes in the emergency department.[4] The study compared patient survey results before and after instituting customer service training for their healthcare providers in a level 1 trauma center emergency department. There were 3 major findings:

1. "All 14 key quality characteristics identified in the survey increased dramatically in the study period.
2. Patient complaints decreased by over 70 percent from 2.6 per 1,000 emergency department visits to 0.6 per 1,000 emergency department visits following customer service training.
3. Patient compliments increased more than 100 percent from 1.1 per 1,000 emergency department visits to 2.3 per 1,000 emergency department visits."[5]

The study suffers from potential bias due to the low number of survey responses, though the respondents were randomly selected to eliminate a potential source of survey response bias. The 14 factors showing improvement included: overall quality of medical care, skill of emergency physician/nurse, overall satisfaction (likelihood of returning), overall respect shown to the patient, doctor's ability to explain, wait time to be seen, staff effort to keep family informed, medical needs met, rapidity of evaluation, triage nurse sensitivity to patient's pain, overall discharge process, explanation by triage nurse, and nursing staff's ability to keep patients informed.

It is not clear whether or not the staff was aware of the study design. This is an important consideration, since often times research suggests that simply monitoring an issue causes awareness of monitoring by the subjects who will alter their behavior.[6] The true test of the effectiveness of their sensitivity training program will be determined in a larger study over a longer period of time, and whether or not similar results can be achieve in other outpatient clinics as well as in inpatient units. The time required for the staff to regress to their mean level of patient sensitivity would be an interesting aspect of a longitudinal study. In addition, if regression were to occur, what level of additional, update oriented, training would continue to facilitate continued increases in patient satisfaction opinion levels? As in this study, logistic regression was selected as a

technique appropriate for eliciting significant relationships between variables in the dataset.

Review of Literature for Significant Findings

The civilian healthcare experience has much to offer the Department of Defense Healthcare system. Two studies using logistic regression analysis have already demonstrated the applicability of the procedure to analysis of patient survey data and the techniques used in this study. More importantly, they contain lessons learned from civilian experiences that military healthcare leaders can use to lead our system to increased opinion levels about patient satisfaction. In the two earlier cited examples, provider choice was shown to positively influence patient satisfaction, and preliminary investigation demonstrated that patient satisfaction could be positively influenced by implementing an effective patient sensitivity training program[7,8]. These programs are easy to implement, but effects upon patient sensitivity should be monitored to determine effectiveness. One might hypothesize that some facilities that currently have high levels of patient satisfaction might have relatively marginal results from such programs, whereas facilities with marginal patient satisfaction to begin with might benefit tremendously with such programs. Information supporting or rejecting such a statement was not found during the literature review process. It is definitely the leader's responsibility to create an environment conducive to creating and maintaining high levels of patient satisfaction. In other words, there are a whole host of environmental factors that can influence patient satisfaction; patient sensitivity training will help increase patient sensitivity, however, management creates the underlying environment. On a

positive note, the third study previously mentioned demonstrated the efficacy of patient satisfaction surveys as an appropriate analytic tool.

In another study with applicable results, researchers investigated the relationship between patient waiting and satisfaction with ambulatory healthcare services with 323 subjects.[9] In a regression model measuring effect of waiting times on satisfaction, the researchers found that total time spent waiting for the clinician was the most significant predictor of patient satisfaction. Two other factors were found to be significantly related to patient satisfaction: informing patients how long their wait would be and being occupied during the wait. The results led the researchers to conclude that if the waiting time could not be shortened, management techniques could be initiated that would help increase patient satisfaction. The first recommendation was that patients be provided with realistic estimates of waiting time. They indicated that indications of unrealistically short waiting times may create high expectations that are not met, consequently, it is important that accurate information be provided. Their second recommendation amounts to keeping the patient busy while in the waiting room by providing a discussion about a health topic or playing a health related video. The thought these efforts would be optimal since the patient would feel as though the treatment process had already begun. In the absence of the above, leaders should ensure availability of a television magazines, newspapers, etc and a comfortable, well lit waiting room. These techniques seem easy for healthcare leaders to implement, even in the military. Most medical treatment facilities receive cable television services and have the funds necessary to procure televisions. Of course, most facilities already have these initiatives in place. I suspect a key to successful implementation of these initiatives involves ensuring magazines and

reading material remain current and ensuring the television is tuned to something like a news channel and not a soap opera for the staff to listen to.

A study by Dansky and Brannon used discriminant analysis to determine dimensions of care that are most closely associated with overall perceptions of quality[10]. The data used for the discriminant analysis came from a patient satisfaction survey which was mailed to 2,055 discharged patients of 13 home health agencies. With overall satisfaction with quality of services as the dependent variable, 11 dimensions discriminated between "excellent" and "good" quality and seven dimensions discriminated between "satisfactory" and "unsatisfactory" quality. Although the study, including the survey design, was specifically target to home health agencies, some interesting ties can be made between the significant indicators and the practices in ambulatory health care. After all, one must ask how different home health agency care is from ambulatory care. Certainly it may provide an area for further analysis at the very least. Items discriminating form "excellent" and "good" quality are as follows:

1. staff were unhurried
2. staff helped me manage my illness better
3. how to reach on-call nurse explained
4. staff were clean
5. staff were on time
6. nurse updated me on my progress
7. nurse spent enough time
8. nurse explained procedures
9. nurse explained medicine instructions
10. nurse made me feel less nervous

Although the first statistical model Dansky and Brannon tested was significant, two of the items had standardized coefficients that clearly contributed the most to the model – staff were unhurried, and how to reach the on-call nurse explained. In the second model,

seven dimensions discriminated between "satisfactory" and "unsatisfactory" quality. Those dimensions included:

1. staff helped me to feel better
2. nurse gave me clear discharge instructions
3. nurse explained medicine instructions
4. nurse communicated with family
5. staff were unhurried
6. staff were clean
7. staff helped manage my illness better

In the second model the two dimensions with the greatest contribution were: nurse explained medical instructions and staff were unhurried. Interestingly, four dimensions were found to be significant predictors in both models: nurse explained medical instructions, staff helped me to manage my illness better, staff were clean, and staff were unhurried. As a healthcare leader it is easy to see parallels between these significant dimensions of healthcare in the home health agency and the work that is performed by the staffs of hospitals and ambulatory care centers, indeed, for all healthcare organizations that interact directly with patients.

A study by Buller and Buller analyzed the effect of physicians' communication style used with the patient and its effect on patient satisfaction[11]. The study telephone surveyed 219 patients from two medical clinics and found that affiliative styles of communications were related positively to patients' satisfaction, while dominant/active styles of communication had a negative relationship with satisfaction. Several variables were found to affect the importance of the communication style, including: severity of the illness, physician age, physician specialty, and number of prior visits. The affiliative style is associated with behaviors "that are designed to establish and maintain a positive relationship between the physician and patient. These include behaviors that

communicate interest, friendliness, empathy, warmth, genuineness, candor, honesty, compassion, a desire to help, devotion, sympathy, authenticity, a nonjudgmental attitude, humor, and a social orientation."[12] The control style, on the other hand, "includes behaviors that establish and maintain the physician's control in the medical interaction."[13] In a sense, this part of their study serves to validate the need for medical staff that are sensitive to needs of their patients and communicate that sensitivity to the patient. Just as in the other studies, patients want to feel the healthcare provider cares about them and their illness.

Aharony and Strasser provide a rather good summary of the patient satisfaction body of knowledge as of 1993.[14] Several factors seemed to emerge repeatedly with respect to structural determinants of patient satisfaction: nursing care, medical care, food quality, noise levels, and physical surroundings.[15,16] It was also noted that patient satisfaction could be affected by housekeeping, admission procedures, food services, and billing personnel.[17,18] With respect to accessibility and continuity of care, Aharony and Strasser found that patient satisfaction is positively related to accessibility, availability, and convenience of care.[19,20] With respect to process, the authors found that research indicated patient satisfaction to be "related to perceptions of the provider's technical skills, intelligence, and qualifications, perceived interpersonal and communications skills generally account for more of the variation in patient satisfaction."[21,22,23] This article is particularly appropriate for review since it focuses on all aspects of patient satisfaction, from measurement to analysis and results. Of all reviewed literature, this particular article should be required reading for all military healthcare leaders. The author has tied the structure of healthcare to the processes of healthcare to the outcome of healthcare

using Donabedian's Structure-Process-Outcome model, a widely referenced theoretical perspective on the delivery of healthcare services[24].

In summary, this civilian literature suggests that logistic regression is an appropriate tool for analysis of survey instrument data to determine which questions are most closely associated with the concept of patient satisfaction. In addition, the use of patient self reported survey instruments was determined to be an appropriate means to ascertain levels of patient satisfaction. Further lessons to be drawn suggest that patient sensitivity training programs are effective, providers should see patients on time and in a timely manner, patients can be kept occupied while waiting, providers at all levels should explain medical instructions and procedures, staff should discuss ways of improving health and illness with the patient, staff should take time with the patient so that they don't feel rushed, and finally, staff should present a professional appearance at all times. Finally, research also noted that personnel not directly treating the patient can have an effect on patient satisfaction. In the next section we will examine a DoD-based data set and explore its similarities and differences.

Notes

[1] Hall, Melvin F. "Patient Satisfaction or Acquiescence? Comparing Mail and Telephone Survey Results." *Journal of Health Care Marketing*, 15(1): 54-61

[2] IBID, p. 55.

[3] Schmittdiel, J; Selby, JV; Grumbach, K; and Quesenberry, CP, Jr. "Choice of a Personal Physician and Patient Satisfaction in a Health Maintenance Organization." *Journal of the American Medical Association*, 278(19): 1596-99.

[4] Mayer, Thom A.; Cates, Robert J.; Mastorovich, Mary Jane; and Royalty, Deborah L. "Emergency Department Patient Satisfaction: Customer Service Training Improves Patient Satisfaction and Ratings of Physician and nurse Skill." Journal of Healthcare Management, 43(5): 427-40.

Notes

[5] IBID. P. 427.

[6] Roethlisberger & Dickson, 1939 as found in *Organizational Behavior and Management* by Laurie Larwood, Kent Publishing Company, Boston Massachusetts, 1984.

[7] IBID, Schmittdiel, et al.

[8] IBID, Mayer, et al.

[9] Dansky, Kathryn H., and Miles, Jeffrey. "Patient Satisfaction with Ambulatory Healthcare Services: Waiting Time and Filling Time." *Hospital and Health Services Administration,* 42(2): 165-77.

[10] Dansky, Kathryn H. and Brannon, Dianne. "Discriminant Analysis: a Technique for Adding Value to Patient Satisfaction Surveys." *Hospital and Health Services Administration*, 41(4): 503-513.

[11] Buller, Mary Klein, and Buller, David B. "Physicians' Communication Style and Patient Satisfaction." *Journal of Health and Social Behavior*, Vol 28(December): 375-88.

[12] IBID. P. 376.

[13] IBID. P. 376.

[14] Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[15] Clearly, et al., as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[16] Doering, as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[17] Lemke, as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[18] Strasser and associates, as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[19] Cleary and McNeil, as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[20] Weiss and Ramsey as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[21] IBID, Aharony and Strasser, pg. 61.

[22] IBID, Cleary and McNeil.

[23] IBID, Doering.

[24] Donabedian as found in Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

Chapter 4

Overview of the Study

> *There is no need to recount to this group the specific, gruesome details of TRICARE implementation. It is sufficient to say that Region Two has set a new, embarrassingly low standard for contract administration. And this is as perceived by Sailors.*[1]
>
> —Admiral J. Paul Reason
> Commander in Chief, United States Atlantic Fleet

A logistic regression analysis of the 1997 annual beneficiary survey will be conducted to perform an exploratory analysis into satisfaction with healthcare. The survey is administered by a contractor to the Office of the Assistant Secretary of Defense (Health Affairs), TRICARE Management Activity. The goal is to find areas that have significant findings where patients are satisfied with their healthcare and where they are not satisfied with their healthcare.

The 1997 Health Care Survey of DoD beneficiaries Dataset

The 1997 Health Care Survey of DoD Beneficiaries is the third annual survey conducted by the Department of Defense (Health Affairs). The survey was designed to investigate beneficiaries' opinions concerning their access to, familiarity and satisfaction with the Military Health Care System and the TRICARE system. A copy of the survey instrument can be found at appendix A.

Sampling Design

The sample was supplied from the Defense Enrolment Eligibility Reporting System (DEERS) files. The sample was a stratified proportionate random sample with some over-sampling to ensure adequate representation. The beneficiary groups eligible for participation in the survey included: active duty personnel, family members of active duty personnel, retirees, eligible beneficiaries of retirees, and survivors. Operationally, the survey instrument was mailed to those selected for participation. Targeted mailings and re-mailings, including thank-you/reminder letters were mailed to increase the response rate. The database consisted of 78,857 responses.

The Data

The specific data used for this analysis included responses for the following variables used as the dependent variables:

- 51(a&b): Asking respondents how much the agree or disagree with the following statements about the health care they received at Military facilities.
  - 51a: I am satisfied with the health care that I receive at military facilities.
  - 51b: I would recommend military health care to my family or friends who need care.

Respondents used a five-point Likert scale to respond to all items. The individual response options appear in the questionnaire as: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. For the purposes of this data exploration, the response data were collapsed into one of two dichotomous variables based on the following criteria. If the respondent selected response 1 or 2 the response was re-coded in a new variable as a zero (indicating disagreement). If the respondent selected response 4 or 5, the response was re-coded in the new variable as a one (indicating agreement). If the respondent selected response 3, the undecided response

was not used as part of the data analysis. Since a response of 3 indicated the respondent was neither satisfied nor dissatisfied, it was determined that definite "agree" or "disagree" responses with 1, 2, 4, or 5 were more germane to the research question

There were 33 independent variables chosen for inclusion in each of the models. The questions can be seen individually at Appendix A. Specifically, questions 52(a – gg) provided the data for the independent variables. The question asks the beneficiary to rate the aspects of the health care they received at military facilities in the past 12 months. The responses were also Likert scaled, with the following individual response options: (1) poor, (2) fair, (3) good, (4) very good, (5) excellent, and (6) not applicable. Records coded (6) not applicable were excluded from this study since it suggests the beneficiary felt they did not use the service indicated. The questions generally measure overall satisfaction, access to appointments, access to system resources, technical quality, interpersonal concern, choice and continuity, and finances. A factor analysis of the survey data was not completed as part of this study to interpret factors from the variables or to summarize variables into a few factors, such as those indicated.

The Model

Since the model dependent variable is dichotomous, indicating either the presence or absence of an event, the model is nonlinear, and therefore, a dichotomous logistic regression procedure is most appropriate for the analysis. Logistic regression basically calculates the probability of an event, in this case, satisfaction with care/treatment at a military treatment facility. In a sense, probability of a satisfied patient response as a function of the explanatory variables. In this case, the linear logistic model takes the following form: $\log(p/(1-p))=\alpha+\beta_1X_{1+}\beta_2X_2+\beta_3X_3+\ldots+\beta_{33}X_{33}$. In solving for p, given

any estimate for α, $\beta_{1,}$ $\beta_{2, \ldots,}$ $\beta_{33,}$ the estimates for p will always be within the proper range for probabilities, 0 and 1.[2,3,4]

Definitions and Assumptions

All respondents to this survey reported their age as 18 years old or older and included patients over 65 years of age.

It is assumed that the results apply only to the population that completed the survey. Those who did not respond to the survey instrument may have different opinions about the satisfaction with care they received. Although available, the dependent variable was not stratified by beneficiary category to determine if differences exist in levels of satisfaction or differences exist with respect to items that may be significantly related to satisfied or dissatisfied responses. It is assumed that healthcare leaders in the military healthcare system are trying to satisfy all beneficiary categories, rather than to target their patient satisfaction programs. For example, some targeting may wish to be done for active duty patients and their family members to determine what their needs are and how those needs vary from other beneficiary categories. However, greater access to care by active duty members and their family members may have skewed the responses.

Caution must also be taken in interpreting results found during this study because the samples used for the logistic regression analysis and the samples used in cited literature review may not represent the populations as a whole of either subgroup (military or non-military).

Notes

[1] Reason, J. Paul. Keynote address to Navy Surgeon General's Conference, Plenary Session 1. 23 September 1998, Waterside Marriott Hotel, Norfolk, Virginia. Taken from speech text available on the world wide web.

[2] SAS Institute Inc. *SAS/STAT User's Guide, Volume 2, GLM-VARCOMP*, Version 6, 4th ed. June 1993.

[3] Sharma, Subhash. *Applied Multivariate Techniques*. New York, New York: John Wiley & Sons, Inc., 1996.

[4] Hosmer, David W. Jr., and Lemeshow, Stanley. *Applied Logistic Regression*. New York, New York: John Wiley & Sons, Inc., 1989.

Chapter 5

Results and Interpretation of Results

A forward conditional logistic regression equation was used to model 23 of the 33 independent variables using H9751a, "I am satisfied with the health care that I receive at military facilities" as the dependent variable. SPSS 8.0 for Windows used to perform the statistical analysis on a personal computer (PC). The significance level for variable inclusion was set at .50 and the significance level for variable removal was set at .90. Initially these may seen well beyond what is traditionally thought to be appropriate significance levels for inclusion, however, the Applied Logistic Regression text suggested that other studies have found significant variables dropped out when initially low parameters were established for inclusion.[1] The significance level for removal should be higher than that selected for inclusion to keep the variable from falling out of the model just after inclusion. After the initial logistic regression, a subsequent logistic regression equation was run. It used a general block entry form including only the variables remaining in the final equation from the conditional forward logistic regression model. The results of this data model can be found at Table 1.

Table 1. Forward Conditional Logistic Regression Results

Variable	B	S.E.	Wald	Sig	R	Exp(B)
H9752A	-0.0719	0.0271	7.0580	0.0079	-0.0185	0.9307
H9752BB	0.1217	0.0360	11.4321	0.0007	0.0252	1.1294
H9752C	0.3406	0.0380	80.4032	0.0000	0.0727	1.4058
H9752D	0.2892	0.0371	60.8767	0.0000	0.0630	1.3353
H9752DD	0.1417	0.0433	10.7081	0.0011	0.0242	1.1523
H9752E	-0.0465	0.0340	1.8762	0.1708	0.0000	0.9546
H9752EE	0.0676	0.0418	2.6063	0.1064	0.0064	1.0699
H9752FF	-0.0207	0.0465	0.1981	0.6562	0.0000	0.9795
H9752G	0.1363	0.0339	16.1269	0.0001	0.0309	1.1460
H9752GG	-0.1178	0.0260	20.4822	0.0000	-0.0353	0.8888
H9752H	0.2184	0.0382	32.6254	0.0000	0.0455	1.2441
H9752I	0.1069	0.0408	6.8713	0.0088	0.0181	1.1128
H9752K	-0.0804	0.0291	7.6551	0.0057	-0.0195	0.9227
H9752L	0.0554	0.0453	1.4966	0.2212	0.0000	1.0569
H9752M	0.1357	0.0486	7.7984	0.0052	0.0198	1.1453
H9752N	0.1055	0.0528	3.9930	0.0457	0.0116	1.1113
H9752P	0.1690	0.0537	9.8984	0.0017	0.0231	1.1841
H9752Q	0.9041	0.0565	256.1011	0.0000	0.1310	2.4698
H9752S	-0.0756	0.0476	2.5168	0.1126	-0.0059	0.9272
H9752T	0.1727	0.0488	12.5250	0.0004	0.0267	1.1885
H9752U	-0.1582	0.0458	11.9008	0.0006	-0.0258	0.8537
H9752W	0.0728	0.0468	2.4160	0.1201	0.0053	1.0755
H9752Y	-0.1369	0.0417	10.7717	0.0010	-0.0243	0.8721
Constant	-5.0776	0.1380	1354.1220	0.0000		

Table 2 provides an abbreviated text definition of the variables. All but six of the variables were significant at the α=.05 level. The six variables were not found significant at the α=.10 level and are the following variables: H9752E, H9752EE, H9752FF, H9752L, H9752S, and H9752U. Although the 17 significant variables were significant, a scree plot demonstrated a quickly diminishing additive effect to the model due to the large number of variables. Ideally, some of the variables could be dropped without diminishing the predictive utility of the model significantly. In fact, the predictive ability of a logistic regression model containing all 33 variables was 87.47%. In the 23 variable logistic regression model of 10,567 complete cases, was 87.46%. With forward stepwise logistic regression, the model significantly improved the Chi-square value at the α=.10

level or better for the first 18 variables shown in Table 1. The remaining variables did not contribute to the overall Chi-square value of the final model. In the final logistic regression model, (excluding the six variables mentioned earlier that were not significant at the α=.10 level), the predictive ability of the model was 87.35%. The overall Chi-square indicator for the model remained significant at the α=.001 level.

Table 2. Description of Variables in Logistic Regression Model

H9752A	Mil fclty past yr: convt trtmnt location
H9752BB	Mil fclty past yr: able choose HC prvdr
H9752C	Mil fclty past yr: access to HC if need
H9752D	Mil fclty past yr: access to specialist
H9752DD	Mil fclty past yr: prvdr interest outcme
H9752E	Mil fclty past yr: access to hospital HC
H9752EE	Mil fclty past yr: med fin hrdshp prot
H9752FF	Mil fclty past yr: HC w/o financial prob
H9752G	Mil fclty past yr: ease of making appts
H9752GG	Mil fclty past yr: ease of parking
H9752H	Mil fclty past yr: wait time in office
H9752I	Mil fclty past yr: time from mkg appt-vs
H9752K	Mil fclty past yr: prescr svcs available
H9752L	Mil fclty past yr: thoroughness of exam
H9752M	Mil fclty past yr: ability to diagnose
H9752N	Mil fclty past yr: skill of HC prvdr
H9752P	Mil fclty past yr: outcome of your HC
H9752Q	Mil fclty past yr: overall HC quality
H9752S	Mil fclty past yr: prvdr expln med tsts

Twenty variables were included in a forward conditional logistic regression model of the 33 independent variables in the model for the second dependent variable – H9751b, "would recommend military health care to family and friends who need care." The significance level for inclusion was set at .50 and the significance level for removal was set at .90 as in the previous model. After the initial logistic regression, the final logistic regression equation was used in a general block entry form including only the variables

remaining in the final equation from the conditional forward logistic regression equation. The results of this data model can be found at Table 3.

Table 3. Forward Conditional Logistic Regression Results

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
H9752A	-0.1374	0.0253	29.5736	1	0.0000	-0.0370	0.8716
H9752B	0.0970	0.0303	10.2697	1	0.0014	0.0203	1.1019
H9752BB	0.3676	0.0298	152.4449	1	0.0000	0.0864	1.4442
H9752C	0.3122	0.0332	88.1821	1	0.0000	0.0654	1.3664
H9752D	0.2626	0.0309	72.3982	1	0.0000	0.0591	1.3003
H9752DD	0.0782	0.0382	4.1936	1	0.0406	0.0104	1.0814
H9752E	-0.0857	0.0325	6.9422	1	0.0084	-0.0157	0.9179
H9752F	0.0461	0.0256	3.2404	1	0.0718	0.0078	1.0472
H9752G	0.0371	0.0275	1.8279	1	0.1764	0.0000	1.0378
H9752GG	-0.0436	0.0220	3.9350	1	0.0473	-0.0098	0.9574
H9752H	0.1939	0.0310	39.1184	1	0.0000	0.0429	1.2140
H9752M	0.0723	0.0406	3.1695	1	0.0750	0.0076	1.0750
H9752N	0.2655	0.0455	34.0060	1	0.0000	0.0399	1.3041
H9752Q	1.0354	0.0489	448.4648	1	0.0000	0.1489	2.8162
H9752R	-0.1103	0.0439	6.3089	1	0.0120	-0.0146	0.8956
H9752T	0.0526	0.0429	1.5004	1	0.2206	0.0000	1.0540
H9752U	-0.0788	0.0387	4.1510	1	0.0416	-0.0103	0.9242
H9752V	0.0817	0.0287	8.1412	1	0.0043	0.0175	1.0852
H9752X	0.1151	0.0447	6.6271	1	0.0100	0.0152	1.1220
H9752Y	-0.1748	0.0380	21.1911	1	0.0000	-0.0309	0.8396
Constant	-5.7327	0.1240	2136.7810	1	0.0000		

Table 4 provides an abbreviated text definition of the variables. All variables were significant at the α=.01 level.

Table 4. Description of Variables in Logistic Regression Model

H9752A	Mil fclty past yr: convt trtmnt location
H9752B	Mil fclty past yr: convenient hours
H9752BB	Mil fclty past yr: able choose HC prvdr
H9752C	Mil fclty past yr: access to HC if need
H9752D	Mil fclty past yr: access to specialist
H9752DD	Mil fclty past yr: prvdr interest outcme
H9752E	Mil fclty past yr: access to hospital HC

H9752F	Mil fclty past yr: access to care - emer
H9752G	Mil fclty past yr: ease of making appts
H9752GG	Mil fclty past yr: ease of parking
H9752H	Mil fclty past yr: wait time in office
H9752M	Mil fclty past yr: ability to diagnose
H9752N	Mil fclty past yr: skill of HC prvdr
H9752Q	Mil fclty past yr: overall HC quality
H9752R	Mil fclty past yr: prvdr expln of prcdrs
H9752T	Mil fclty past yr: attn prvdr gives you
H9752U	Mil fclty past yr: advice to avoid ill
H9752V	Mil fclty past yr: admin staff courtesy
H9752X	Mil fclty past yr: prvdr concrn for me
H9752Y	Mil fclty past yr: prvdr concern my prvy

Although all 20 variables were significant, a scree plot again demonstrated the quickly diminishing additive effect to the model due to the large number of variables, though the effect is considerably lessened in this model than in the previous model. As before, some of the variables could be dropped without significantly diminishing the predictive utility of the model. The 20 variable logistic regression model using 15,700 complete cases, was 86.37%, compared with 87.47% for the entire model containing 33 variables. With forward stepwise logistic regression, the model significantly improved the Chi-square value at the α=.10 level or better for the first 12 variables shown in Table 3. The remaining variables did not contribute significantly to the overall Chi-square value of the final model. The overall Chi-square indicator for the model remained significant at the α=.001 level.

Overall, given the variables selected for inclusion in these exploratory models, the second model seemed to have a better fit. The overall chi-square of the first model was 6509.3 with 23 degrees of freedom, whereas, the second model had an overall chi-square value of 9300.3 with 20 degrees of freedom. In addition, in the final block entry of

variables (after the initial deletion of variables by forward conditional stepwise procedures) models, all but two variables in the second model (dependent variable H9751b) were significantly related, whereas 6 variables were not significantly associated with the dependent variable in the first model. Two other indicators of model fit are the –2 Log Likelihood and the Goodness of Fit statistics. For the first model, the –2 Log Likelihood was 8307.5 and the Goodness of Fit was 40334.5. For the second model, the –2 Log Likelihood statistic was 10849.3 and the Goodness of Fit statistic was 34047.7.

Notes

[1] Hosmer, David W. Jr., and Lemeshow, Stanley. *Applied Logistic Regression*. New York, New York: John Wiley & Sons, Inc., 1989.

Chapter 6

Just What Does All Of This Data Really Suggest – Are We Different?

Often we like to think we are different because we have a readiness mission, but does that really make us different from the perspective of satisfying patients, or is it that we have a different reason for existence? It is true that we exist for readiness reasons, however, that does not negate the need to provide healthcare services which satisfies our beneficiaries. The thesis stated earlier suggested that we are facing the same types of patient satisfaction issues as our non-military healthcare sector. Since it is beyond the scope of this paper to empirically test the two sectors for likeness, I suggested that surrogate measures would be used. In other words, if our findings are the same as those findings from literature reviews, then our systems are more alike than they are different.

A comparison of the literature with the regression results suggests that our systems are, in fact, more similar than they are dissimilar; providing support for the thesis of this paper. In fact, there is very little, if any, noted dissimilarity between the findings reported above and the earlier cited lessons from the literature review. In terms of similarities, the list merits quick review:

- Ability to choose healthcare provider and access to the healthcare structure was significantly related in both logistic regression models of this study, as it was reported in the Schmittdiel article and review by Aharony and Strasser.[1,2] In this

study questions specifically related to ability to choose healthcare provider, access to healthcare in general, access to specialists, access to hospital based healthcare, ease of making appointments, and convenience of treatment location are each related to accessing the military healthcare structure and were found significant in both final logistic regression models. Included in only one of the final models were: time between making appointment to time to actual appointment, access to emergency medical care, and convenient hours of operation – each related to accessing the military healthcare structure.

- According to the literature, physical surroundings were shown to be related to patient satisfaction, as was waiting time in the office.[3,4] In this study, specific questions found significant in both final logistic regression models included: convenience of treatment location (may also be related to access), ease of parking, and waiting time in the provider office.
- Finally, according to the literature review, provider interactions were found to be related to patient satisfaction.[5,6,7] This data in this study suggested similar relationships. Questions significantly related to patient satisfaction in both logistic regression models included: provider interest in outcome, ability to diagnose problem, skill of healthcare provider, and overall healthcare quality. Questions significantly related in one of the logistic regression models included: provider explains medical tests, provider explains procedures, attention provider gives to you, staff courtesy, provider concern, and concern for privacy.

Clearly the similarity between the results identified as significantly related to patient satisfaction in the two final logistic regression models presented in this study and the results of the studies presented in the literature review is striking. The data seem to suggest that the thesis is correct, that our populations share the same areas significantly related to patient satisfaction.

What this means to military healthcare leaders is that we should be able to confidently implement programs for increasing patient satisfaction that have been successfully tested in the non-military healthcare sector. In addition, trends noticed in the non-military sector may be more quickly identified in the military healthcare system by keeping abreast of non-military (and military) initiatives and trends in the healthcare delivery process. The topic of the next chapter is the analysis of our current system for problem resolution.

Notes

[1] Schmittdiel, J; Selby, JV; Grumbach, K; and Quesenberry, CP, Jr. "Choice of a Personal Physician and Patient Satisfaction in a Health Maintenance Organization." *Journal of the American Medical Association*, 278(19): 1596-99.

[2] Aharony, Lea and Strasser, Stephen. "Patient Satisfaction: What We Know About and What We Still Need to Explore." *Medical Care Review*, 50(1): 49-79.

[3] Dansky, Kathryn H., and Miles, Jeffrey. "Patient Satisfaction with Ambulatory Healthcare Services: Waiting Time and Filling Time." *Hospital and Health Services Administration,* 42(2): 165-77.

[4] IBID, Aharony and Strasser.

[5] Dansky, Kathryn H. and Brannon, Dianne. "Discriminant Analysis: a Technique for Adding Value to Patient Satisfaction Surveys." *Hospital and Health Services Administration*, 41(4): 503-513.

[6] Buller, Mary Klein, and Buller, David B. "Physicians' Communication Style and Patient Satisfaction." *Journal of Health and Social Behavior*, Vol 28(December): 375-88.

[7]IBID, Aharony and Strasser.

Chapter 7

Analysis of Current System for Problem Resolution

An analysis of the current healthcare system suggests two distinct methods for analyzing patient satisfaction. The first method/approach involves data collected and analyzed at the facility and the first hand knowledge of the community that the medical treatment facility leaders have. Local survey instruments are used at many, if not all military treatment facilities. The problem occurs when the instrument is not accurately collecting the information facility leaders believe is being collected and subsequent decisions are made from analytic results of the surveys. The results of these surveys may, but don't always, make it out of the local departments. When significant issues are identified by medical treatment facility leaders, they are often raised through the executive leadership of the facility to the Major Command Headquarters where it may or may not be shared in a forum with other facilities. From the Major Command level, it may be forwarded to the Headquarters United States Air Force Surgeon General's Office for consideration. Currently, since one of the Surgeon General's goals is patient satisfaction, there is a single point of contact for these matters – at this time, it is Colonel Sid Brandler, USAF, MSC. At this level it can be shared among a variety of HQ staff personnel as the issue becomes "staffed." If the issue is significant enough or can not be handled entirely by the United States Air Force Surgeon General's Office, the Surgeon

General can raise the issue with either the Chief of Staff, United States Air Force, or he can raise it with the TRICARE executive committee which consists of DoD Healthcare leaders and the military Surgeons General.

The second method/approach basically begins with data collected using validated survey instruments that are generally administered by a very competent contractor working for the Office of the Secretary of Defense, TRICARE Management Activity. Surveys are collected at various times and are a rich resource of patient satisfaction data waiting to be mined. The survey data are scanned and analyzed for key trends and some of the information is used in the facility "report card" process. This information is summarily provided to the TRICARE lead agents and the Major Command Headquarters where it may or may not be analyzed further. Part of the problem is the busy pace of all healthcare executives, and part of the problem is that most healthcare administrators do not understand how to interpret the statistical data provided to them. That is not to say that they don't understand the plain text "report card" data, but rather, they don't understand the data that are available to them, or if they do, they don't have the statistical ability to conduct analysis of the data. Additionally, many leaders at the facility level may not even realize the extent of data collected that can be attributed to the facility level. One other potential issue is the timeliness of the data. The 1997 Health Care Survey of DoD Beneficiaries is the most current available at this date. The new data may not be available, in part due to the statistical rigor and testing, for several months. In fact, the data for this survey were only initially made available in the September 1998 time frame. Other data is collected that is much more timely, however, many leaders simply are not aware of the existence of such data.

What all of this information seems to suggest is that we have good attempts, albeit potentially inconsistent, at locally collecting patient satisfaction data and making all aware of its indications. In addition, we have a global system which is capable of providing good facility level feedback, as well as feedback germane to the military healthcare system as a whole. We need to ensure data are traveling in both directions, from the local levels to higher headquarters and from higher echelons to all healthcare workers in the military system. Given the similarity between military healthcare patient satisfaction and non-military healthcare patient satisfaction, key leaders at the facility level and throughout higher echelons should be encouraged, if not expected, to keep current with respect to professional journals relative to healthcare.

Chapter 7

Conclusion

This study suggests that we are doing some things right, for example, we have taken the initiative to establish increasing patient satisfaction as a goal/mandate. We have taken action to quantify current levels of patient satisfaction and we are beginning to analyze the data to ascertain areas for improvement. We have spruced up the appearance of our facilities and are working to improve and modernize the facilities to make them more comfortable places to visit and more efficient places to deliver healthcare. In addition, we are actively communicating with our patient population through a variety of means. We are conducting patient sensitivity training sessions and have provided televisions in the waiting rooms so that patients will be kept busy until they are ready to be treated. Despite all of our advances, we still have some areas of concern.

We still largely empanel our patients, rather than giving them the choice of a provider as civilian literature suggests. We need to work on providing access to care that meets the needs of our patients. In many areas we have expanded hours, but perhaps that has not increased access enough – perhaps we need to become more efficient so that we can see more patients. Our patients want access to specialists, just as they do in the civilian healthcare system. Ease of parking and making appointments continues to be areas of concern, as do waiting time in the office and staff relations. Patient sensitivity

programs are effective, but we need to find ways to make them more effective, since the issue of provider communication/sensitivity is one of the most fundamental factors that appears to correlate to patient satisfaction.

Modern computer technology has made analysis of patient satisfaction survey data much more accessible to facility leaders, however, they need to be made aware of the data that are being collected and how they can access the information. In the absence of talented individuals who understand how to work with these data sources, and even if available, modern healthcare leaders at all levels should continue to stay current in healthcare trends by reviewing applicable literature pertaining to both military and civilian sectors.

Healthcare in the military is basically the same as healthcare provided in the civilian sector, so we should not discount those sources of information. There are many lessons to be learned from civilian healthcare experiences. We may not be faced with the immediate financial threat of losing a patient to a competitor, however, we are part of a benefits package offered to military members and we can contribute to their decision to remain in the service for a full and vested career, or we can contribute to their decision to separate. I should think that we truly want to be members of a healthcare system that is providing world class healthcare. In fact, I would hope that we are providing healthcare to our patients that exceeds their expectations, for that is the way to a truly satisfied patient population. We can and should make a difference, much of what it takes to create and maintain a very satisfied patient population is relatively easy to produce. As healthcare leaders we must expect that our facilities do everything in power to satisfy their patients, and for those issues not within their control, we should raise to issues to the

level that can affect change to the system. It is not about losing the business of the patient, it is about losing the patient to another business and about losing the chance to take care of future patients.

Appendix A

1997 Health Care Survey of DoD Beneficiaries, Form A

Attached is a copy of the annotated questionnaire. As indicated on the front of the survey instrument, it was administered by United Healthcare's Survey Processing Activity under contract with the Department of Defense.

Appendix B

Frequency Distributions

Frequency distribution information is presented here for variables used in this study.

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