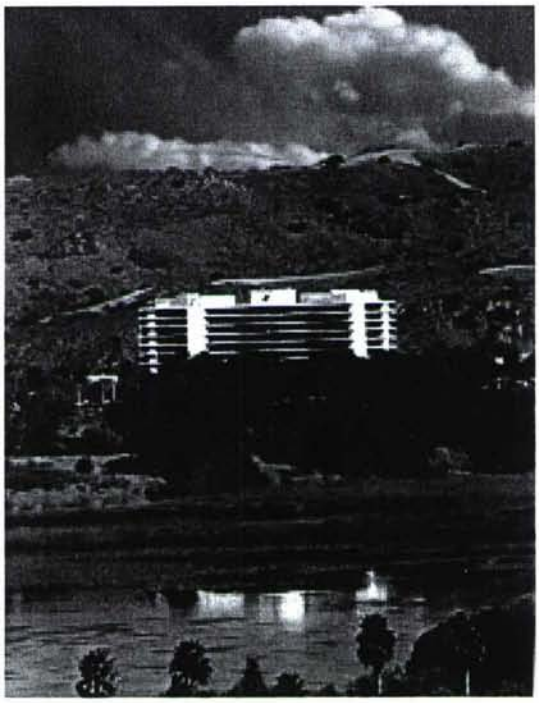


Optimizing Naval Hospital Camp Pendleton's Primary Care Access by Managing Demand of the Emergency Department through a Health Services Center: A Marcus Welby Care Initiative

LTJG Alexander Aldana

U.S. Army - Baylor University Graduate Program in Health Care Administration

A Graduate Management Project submitted in partial fulfillment

of the requirements for a Masters degree in Health Care Administration

June 2006

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
29-06-2006	Graduate Management Project	September 2005 - June 2006

4. TITLE AND SUBTITLE
Optimizing Naval Hospital Camp Pendleton's Primary Care Access by Managing Demand of the Emergency Department through a Health Services Center: A Marcus Welby Care Initiative

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Aldana, Alexander

5d. PROJECT NUMBER
N/A

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Army-Baylor University Graduate Program
BLDG 2841 MCCS-HRA
3151 Scott Road
Fort Sam Houston, TX 78234-6135

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Available for Public Release

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The number of Emergency Department (ED) visits a hospital receives is an indicator of the difficulties patients face when trying to access the healthcare system. Currently, NHCP's ED visits are at an all-time high with patients treating the ED as a walk-in clinic. This paper documents NHCP's approach to improve access by managing its ED demand through the use of a Health Service Center (HSC) and increased primary care hours.

The study found that the HSC had a positive impact on decreasing the amount of non-urgent, Prime patients utilizing the ED during working hours. The new services allow the ED staff to focus their resources on those with the greatest need, while directing non-urgent patients to a more appropriate place for care.

15. SUBJECT TERMS
Access, Emergency Department, ED utilization, Continuity of Care, Health Service Center, Naval Hospital Camp Pendleton, managing ED demand, TRICARE Prime. Military, Military medicine, primary care, Marcus Welby Care

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			CDR Chris Garcia/ LTJG Alexander Aldana
U	U	U	~~N/A~~ UU	89	19b. TELEPHONE NUMBER *(Include area code)* 210-221-6443 or 951-212-9231

ACKNOWLEDGEMENTS

Surprisingly, this has been the most difficult part of this paper to write. While only my name dons the coversheet, this paper is the result of hard work from many dedicated individuals. First and foremost, I would like to thank Naval Hospital Camp Pendleton's (NHCP) CO, CAPT Steven Nichols. It is refreshing to see someone at this point of his career still putting patients first. Every decision this command makes is made with the wellbeing of the patients in mind. I feel privileged to have been able to document this important change to improve access for NHCP's beneficiaries.

Next, I want to thank my preceptor, CDR Michael Warrington, for keeping me focused on timelines and getting this project finished. He is a very knowledgeable individual and always had the right answer to my questions. I have grown tremendously as an Officer under his guidance. Similarly, I want to thank my reader, CDR Chris Garcia, for her total commitment to helping me turn out a quality product. Even with all she had going on, she was always available to point me in the right direction.

I want to thank my Army/Navy Baylor class; whenever I had a question or needed some information, I would just send out a group email and was assured that I would receive multiple responses immediately. Specifically though I would like to thank LT Kelly Boardway, for acting as my soundboard. Her greatest asset was that she never held punches, even when I had hoped that she might. LTC James Nold (our class "Skipper") gave me much insight into his world of the ED, which was crucial. LT Steve Marty and LTJG Mike Knoell are classmates for which statistics to them is similar to breathing. They were helpful in assisting me in analyzing and documenting my findings.

My thanks go out to Ms Tina White for allowing me to pick her brain on a daily basis. She has a wealth of knowledge and is a tremendous asset to this organization. There are numerous other individuals that were all so helpful to me to include: Mr. Bill Lammie (my data source), Mr. Steve

Medina, CDR Steven Loberg, Ms. Patti Smith, CAPT McKinsey, CDR Louis Orosz, CDR Pamela Hatala, LCDR Michael Simmons, LT Connie Limburg, Ms. Rasheedah Simmons, and a slew of other very supportive individuals.

Lastly, and most importantly, I want to thank my family. It is clear to me that there is no way that I could have taken on and finished this Master's program without their understanding and continued support. It is easy to tackle obstacles in life when you have the type of support at home that I do. My biggest supporters have been my wife (Marcia) and mother (Mom). They both would build me up when I thought I could not take anymore. For that I thank you both! To my sons, Hunter and Julian, I am finally done…game on!

Abstract

The number of Emergency Department (ED) visits a hospital receives is an indicator of the difficulties patients face when trying to access the healthcare system. Currently, NHCP's ED visits are at an all-time high with patients treating the ED as a walk-in clinic. This paper documents NHCP's approach to improve access by managing its ED demand through the use of a Health Service Center (HSC) and increased primary care hours.

The study found that the HSC had a positive impact on decreasing the amount of non-urgent, Prime patients utilizing the ED during working hours. The new services allow the ED staff to focus their resources on those with the greatest need, while directing non-urgent patients to a more appropriate place for care.

Table of Contents

List of Tables

List of Figures

List of Appendices

Introduction

Mrs. Smith is a healthy 42 year old woman. She is an active duty (AD) family member enrolled in TRICARE Prime. She wakes up one morning with an awful sore throat and difficulty swallowing. She tries to contact her Primary Care Manager (PCM) by phone and hears a recorded message stating, "If this is an emergency, please hang up and dial 911, otherwise choose from one of the following options." Not feeling that her illness is an emergency, she patiently sits through the assortment of choices and finally hears option six, a chance to speak to a live person; she gladly presses six. She is welcomed by a recorded message that states, "Thank you for holding, there are 26 callers ahead of you, your approximate wait time is 20 minutes." After a 32 minute wait in the phone queue, her call is answered by a receptionist. Mrs. Smith explains her condition and is informed that her PCM's schedule is entirely booked. She is presented with three options: to call back tomorrow morning to see if an appointment becomes available, to book an appointment three and a half weeks away, or if she feels she can not wait, go to the Emergency Department (ED). Wanting to see her provider, she decides to make the appointment.

After a couple of days, her pain progressively worsens. She decides she could not wait for her scheduled appointment and goes to the ED to be seen. Upon her arrival, she is surprised by the number of individuals waiting to be seen. She could not help but feel somewhat overwhelmed by the semi-controlled confusion that surrounded her. Mrs. Smith stumbles upon the triage nurse who, after hearing Mrs. Smith's symptoms, quickly determined that her illness is not critical and asks her to have a seat in the waiting area. After a few hours, she is brought to an exam room where she waits an additional hour to be seen by the doctor.

When the doctor finally arrives, he asks Mrs. Smith, "What brought you to the ED?" She explains her symptoms, again. Following a quick examination the doctor states, "You may have

strep throat. I want to order a throat culture and start you on some antibiotics." As quickly as the doctor appeared, he was gone, moving on to the next of what seemed a never ending stream of patients. After the throat culture and an additional hour wait at the pharmacy, Mrs. Smith is on her way home, weary from the long day she just endured. A simple sore throat causes her to miss three days of work, suffer with throat pain for three days, and helps crowd an already very busy ED.

TRICARE alleges that an advantage of being enrolled as a Prime patient is the *policy directed access standards* for TRICARE appointments, which guarantee access for an urgent visit within 24 hours. Was this standard met? Did Mrs. Smith receive the quality care she was promised?

Consider another scenario where Mrs. Smith contacts her PCM and receives an appointment for the same day. Since Mrs. Smith only sees her PCM or his team, he knows her well and understands her concern about her sickness. Mrs. Smith arrives at the physician's office and is greeted by the front desk receptionist, who checks her in and asks her to have a seat in the waiting area. Within a few minutes, she is called in by a corpsman that proceeds to carry out her preliminary examination (i.e. history, blood pressure, temperature). Mrs. Smith is then brought into the exam room where she waits for her doctor.

Immediately upon seeing her doctor, she feels at ease. She appreciates the doctors nature of "being there" for her. This role has a therapeutic effect all by itself, which is completely lost in the ED. This is not to say that compassionate staff members do not exist in the ED. The ED staff is committed to giving all they can each and every shift, but during demanding times when the ED is filled with critically ill patients, it is impossible to give additional time to any individual patient. Due to this chaotic environment, what ends up being lost is the value of continuous patient-physician relationships.

Patients want a regular doctor who they know and trust. They regard relationships above all else, even enduring poor service and considerable inconvenience to sustain relationships with their doctor (Family Practice Working Party, 2003). In the end, Mrs. Smith left the doctor's office with the same diagnosis and treatment as in the previous example, but her satisfaction with the entire encounter differed tremendously between the two.

Statement of the Problem

According to the Institute of Medicine (IOM, 1993), access to healthcare is "the timely use of personal health services to achieve the best possible health outcomes." This definition emphasizes the importance of "timeliness" as a feature of good access to care. Unfortunately, Department of Defense (DoD) medicine continues to have difficulty meeting timely access standards for its Prime beneficiaries. It is therefore fitting that the IOM (2001) included timeliness as one of its six critical aims to improve the US health care system.

Congress mandates with section 715 of the Defense Authorization Act of 1999 that the DoD must meet prescribed access standards for the care it provides its beneficiaries. These TRICARE Prime beneficiaries are guaranteed an appointment within the following standards:

- The wait time for an urgent care appointment shall not exceed 24 hours
- The wait time for a routine appointment shall not exceed one week
- The wait time for a specialty care appointment or wellness visit shall not exceed 28 days

However, in a study conducted by the Government Accounting Office (GAO), they assert these standards are not being met (2000). They found that Active Duty (AD) and TRICARE Prime beneficiaries were not receiving priority for scheduled appointments. Due to this deficiency, the GAO chartered an Appointment Standardization Integrated Program Team (ASIPT) to develop performance measurements to track access to MTF care.

NHCP has been unable to consistently meet the benchmarks established by ASIPT (see Figures 1 & 2). NHCP's struggle with access mirrors the difficulties seen across DoD medicine in meeting access standards.

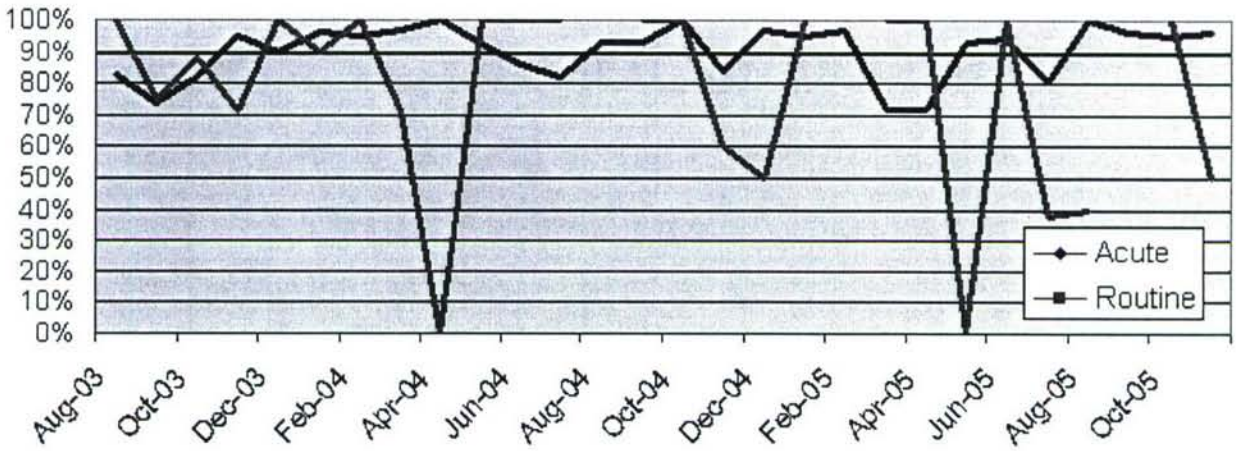


Figure 1. Percentage of NHCP AD Routine/Acute appointments met.

Created from data retrieved from TRICARE Operations Center Military Health Systems Web Site on December 1, 2005.

Note. Data for Routine appointments for August 04, February 05, and September 05 were unavailable. Percentage is based on Primary care only. ASIPT assigned not less than 90% as the benchmark for access to Routine/Acute appointments.

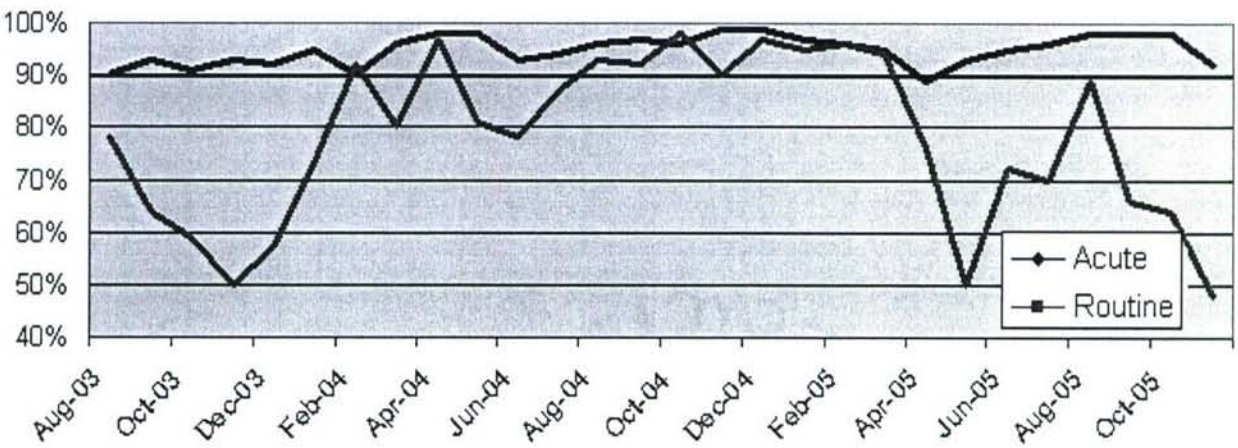


Figure 2. Percentage of NHCP Prime Routine/Acute appointments met.

Created from data retrieved from TRICARE Operations Center Military Health Systems Web Site on December 1, 2005. *Note.* Percentage is based on Primary care only. ASIPT assigned not less than 90% as the benchmark for access to Routine/Acute appointments.

Research Question

This study will chronicle the changes presently being implemented to improve access at NHCP and will document if this transformation actually correlates to improved access. The spot on research question is, Will the implementation of a "patient-centered" approach to primary care with the institution of extended primary care hours and a Health Service Center (HSC), decrease the number of non-urgent, Prime patients seen in the ED during working hours.

Literature Review

A robust literature review was compiled to help provide the reader with background information and to define key terms and definitions. The purpose of a literature review is to bring the reader up to date with regards to the state of research in the field and to explain how this past work fits together to make the research question important.

Access

Over 20 years ago, Penchansky and Thomas (1981) published an article where they noted that access is a major issue in health care policy and is one of the most commonly used words in discussions of the health care system. Amazingly, this statement still holds true today. Presently, the implementation of methods to improve access to care in the Military Health System (MHS) is one of the top priorities of the TRICARE Management Activity (TMA) and is under close scrutiny by TRICARE beneficiaries and the GAO.

Access is a simple term centering on the degree to which individuals are able to obtain services from the health care system when needed. In broad terms, access to care is the ability to obtain needed, affordable, convenient, acceptable, and effective personal health services in a timely manner (Shi & Singh, 1998). Due to troubles in defining and measuring this concept, people often relate access with insurance coverage or having enough providers and hospitals in the geographic

area in which they live. But having insurance and an ample supply of providers does not always guarantee that patients will receive all the care that they need, when they need it. Many patients report difficulties navigating the health care system even after they have gained entry.

Fuchs (1974) states that the problems of access to health care fall into two main categories; special and general. The special problems of access are encountered by specific groups in society; the poor, the ghetto dwellers, and the rural population. The general problem of access is faced by those who have enough income or insurance to pay for care. For these individuals, the problem is just trying to get the kind of care they need when they need it. The general problem of access is a complex phenomenon that represents a failure of the medical care market to match supply and demand. The general problem of access exists primarily with regards to primary care, emergency care, home care, and care outside of customary working hours.

Safety Net

EDs function as safety nets when timely access to primary care is not available. The primary role of the ED is to treat seriously ill and injured patients. However, the ED provides a considerable amount of unscheduled non-urgent care, often because other parts of the health care system fail in their ability to provide this care (CDC, 2005). Poor access to primary care and barriers to follow-up care each contribute considerably to the problem.

For patients, there are many advantages to using the ED for care. Physicians are available 24 hours a day, and are required by law to evaluate every patient who wants treatment, regardless of insurance coverage or the ability to pay (EMTALA, 42 U.S.C. Section 1395dd). The patient can receive timely attention at night or on a weekend and may avoid having to take time off from work or arrange for child care. While this seems like a simple solution to the general access problem, it has many troubling consequences.

Continuity of Care

Continuity is a key part of the IOM's definition of primary care. Continuity of care has been found to be associated with improved utilization of health services, improved health outcomes, and preventive care (IOM, 1994). The continuity of the relationship between doctor and patient is associated with an increase in the quality of care (Gill, 2004). The main reason for this improved health benefit is the fact that physicians will have multiple contacts with their patients over the years. The provider becomes a specialist for that particular patient and provides easy access to health care.

Primary care is personal health care delivered in the milieu of family, culture, and community. The range of services offered should meet all the needs for the individuals and families being served. It is this amalgamation of services that promote and maintain health; prevent disease, and provide a usual source of care for acute/chronic illnesses and disabilities. The PCM serves as the usual entry point into the larger health care system and assumes responsibility for ensuring the coordination of health services.

The beneficial effects of seeing a PCM are undeniable. People and countries with adequate access to primary care realize a number of health and economic benefits including (Philips R. & Starfield B., 2003):

1. Evidence of Effectiveness

- reduced all-cause mortality and mortality due to cardiovascular and pulmonary diseases
- *less emergency department* [italics added] and hospital use
- better preventive care
- better detection of breast cancer, and reduced incidence and mortality due to colon and cervical cancer

2. Evidence of Efficiency

- fewer tests, higher patient satisfaction, lower medication use, and less care-related costs (p.1494).

The lack of continuity between doctors and patients under the TRICARE system has a negative impact on the overall quality of the health care experience. Family members have been required to become part of a system that does not nurture the development of traditional, long-term doctor-patient relationships. This situation has been particularly difficult for family members who suffer with chronic illnesses requiring long-term care.

Anderson (2004) stated that approximately 125 million Americans have at least one chronic condition and 60 million have multiple conditions. He also stated that 78 percent of direct medical expenses in the U.S. are devoted to chronic illness, approaching three-quarters of a trillion dollars annually (p. 263). Obviously individuals, especially those having one or more chronic conditions, would rather have a regular source of care in order to receive continuous supervision and medical attention. A growing body of research demonstrates that physicians who closely manage coordination of care with their patients and families obtain better outcomes (Lawrence, 2002; Bodenheimer, 2002; Wolff, 2002). Dr. Lawrence (2002) stated that patients with chronic illnesses who receive provider continuity:

> *(1) make fewer emergency room visits* [italics added] than patients treated in traditional physician practices; (2) are hospitalized less frequently; (3) suffer fewer complications from their disease; (4) are better able to work or maintain the activities of daily living; (5) have greater confidence in their ability to manage their lives and illnesses; and (6) feel more secure with the care they receive (p. 67-68).

Overcrowding

In 2005, NHCP's commitment to the Global War on Terrorism (GWOT) increased by deploying more staff members than the previous year. This decrease in available staff at NHCP, coupled with an 11 percent increase in ED visits over the same time period, placed an immense strain on an already struggling ED system. This overcrowding of the ED places all involved parties at risk. The excessive clinical strain on an already saturated ED often leads to medical errors and poor outcomes (Gordon, 2001). The only way a busy provider faced with too many patients can care for all of them is to spend less time with each patient. The fine line between a highly efficient assessment and an incomplete one can be easily crossed, generally to the detriment of the patient (Young, 1996).

Another problem caused by overcrowding is an increase in patient wait times. Increased waiting times for patients with acute injuries and other painful conditions usually means prolonged pain and needless suffering. For others, long waiting times create a greater threat if the seriousness of their condition was under-assessed during triage or if there has been a considerable progress of their illness during their wait in the ED.

Long waits in the ED can delay needed care and contribute to an increase in the number of people who choose to leave the ED before receiving a medical examination. Many of the patients who choose to leave the ED without being seen by a physician do indeed need immediate medical care. A study published in Annals of Emergency Medicine (2003) found that 67 percent of the patients that left the ED did so because they believed they had either already waited too long or they believed that the wait looked like it was going to be too long.

Conditions that Prompted the Study

One of the performance metrics created by ASIPT measures the number of patients seen in the Military Treatment Facility (MTF) ED. EDs are a key access point for patients in crisis, but their use is also a gauge of how well a health care system is responding to its patients' needs. According to ASIPT, increases in ED visits would signify an unavailability of desired appointments by patients. Of all the patients arriving to NHCP's ED during FY 2005, only 36% were categorized as having either an urgent or emergent problem warranting emergency care. Although this picture raises concern with the current system, what is especially disturbing is that 60% of NHCP's non-urgent Prime patients are using the ED during working hours, a time when they should ideally have access to primary care.

If the number of ED visits is a true indicator of access, it is apparent that NHCP has an access problem (see Figure 3). In short, NHCP's deficient access system has caused its ED to be used as a default walk-in clinic since timely access to primary care is not available. While this represents a system in crisis, crisis allows for an opportunity to improve.

This problem emerged as a major issue in late July 2005, at which time NHCP received a new Commanding Officer (CO) and Executive Officer (XO). Amid this new leadership change arose a different approach on how business should be conducted. While the access problem at NHCP was an ongoing issue being dealt with tirelessly, the new CO arrived armed with fresh ideas on how the command could improve access. He positioned himself as champion for this issue and has led the way by advocating strongly for improvement. He has sent a clear and consistent message that improving patient access is a priority.

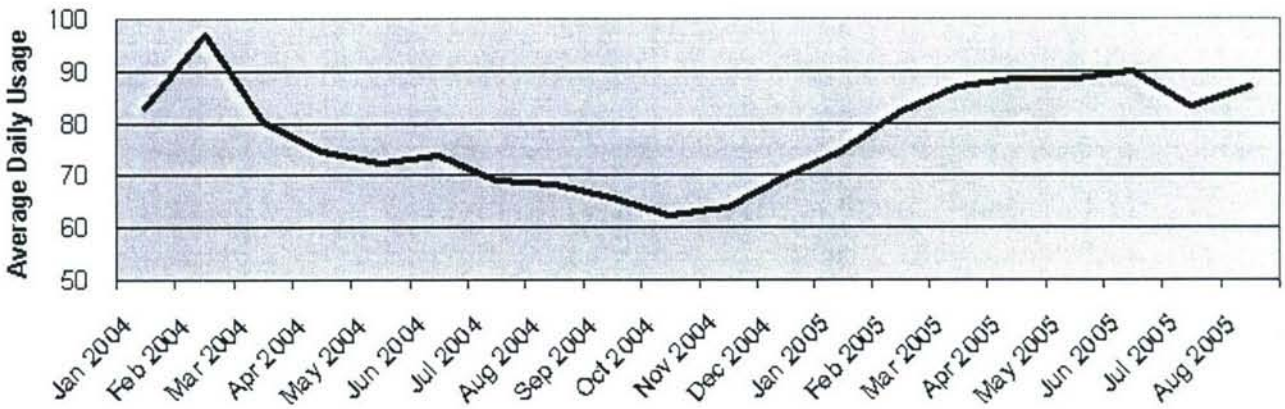


Figure 3. Naval Hospital Camp Pendleton ED visits

Data retrieved from Summarized Management Analysis Resource Tool (SMART) November, 2005.

Importance of study

Why is it necessary to scrutinize the usage of the ED? Because sitting among the truly emergent patients in the ED are many individuals just like Mrs. Smith. They have an urgent problem with distressing symptoms, but the illness itself is not life threatening. The lack of availability of care in a timely manner in a doctor's office leads the patient to the ED for help, because there is no other option. Not only does this destroy the continuity of care for the patient, it often leads to overcrowding of the ED.

According to Young, Wagner, Kellermann, Ellis, & Bouley (1996) the ED has been described as the proverbial "canary in the coal mine," with ED overcrowding indicating a sign of growing difficulty within the hospital and primary care systems (p.10). Currently there is no gold standard used to measure the degree to which EDs are experiencing crowded conditions (Gordon, 2001). Most hospital officials state "they know it when they see it." However, there are several indicators that point to situations in which crowding is likely occurring (Young, et al., 1996). One such indicator is the percentage of patients who leave the ED before receiving a medical evaluation, usually because they are tired of waiting.

The National Hospital Ambulatory Medical Care Survey (NHAMCS) was established in 1992 to collect, analyze, and distribute information about the health care provided by hospital ED's and outpatient departments (McCaig, 2005). In 2005, NHAMCS estimated that the percentage of patients nationwide that left the ED before a medical examination rose from 1.4 percent in 2001 to 1.7 percent in 2003. The GAO (2002) noted in a study that as many as 7 percent of EDs nationally have "leave without being seen" (LWBS) rates higher than 5 percent.

Over the last couple of years, NHCP's LWBS rates have dwarfed those numbers with rates at times exceeding 13 percent, representing a system in turmoil (see Figure 4). A limitation to this indicator is that, because ED staff triage patients, those patients arriving with non-emergent problems normally wait the longest and may likely tire of waiting and leave before receiving a medical evaluation. However, rather mild conditions could potentially become more serious if patients do not receive needed medical care because they leave the ED before being evaluated and treated (GAO, 2003).

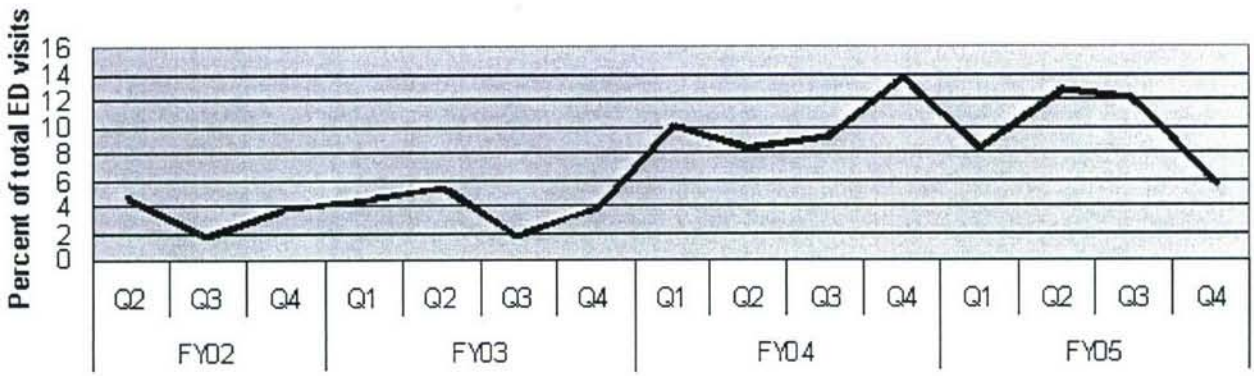


Figure 4. Naval Hospital Camp Pendleton LWBS rates.

Data retrieved from CHCS on January, 2006. *Note.* Percentages were based on FY 2002 ED visits of 22,603; FY 2003 ED visits of 29,990; FY 2004 ED visits of 33,052; and FY 2005 ED visits of 32,519.

A retrospective study from the GAO (2003) looked at the consequences associated with leaving the ED before a medical evaluation and found that 46 percent of those who left were judged

to have needed immediate medical attention, 29 percent needed care within 24 to 48 hours, 11 percent were hospitalized within the next week, and 3 patients required emergency surgery. ED overcrowding has been reported to cause delays in diagnosis and treatment, decreased quality of care, and poor patient outcomes (Lewin Group, 2002). These findings suggest that strains on the ED system adversely affect healthcare quality and access.

Background of Military Health Services System (MHSS)

This background synopsis will provide a basic understanding of the MHSS in order to appreciate how TRICARE has changed to meet its beneficiary's expectations.

Until 1963, the DoD had always provided healthcare to its members and their families through its own network of military hospitals and clinics. To decrease the burden on the military health system, Congress started the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) in 1966 (Chapman, 1995). This allowed family members of active duty personnel and military retirees and their family members to use civilian medical services on a cost-sharing basis with the government.

Since the end of the Cold War, the U.S. military has dealt with new challenges to its organization and mission. Today fewer men and women are on active duty. Along with fewer combat forces, there were reductions in support forces, including physicians and other medical professionals (Chapman, 1995). The Base Realignment and Closure Commission (BRAC) recommended closing a number of installations that were no longer needed for a smaller military force. As a result of this and other downsizing efforts, 35 percent of the military hospitals that existed in the U.S. in 1987 had been closed by 1997. However, the total number of people seeking health care through the MHSS had dropped by only 9 percent (GAO, 2004).

Another clear shift occurred in the early 1950s. Military retirees and their families comprised only 8 percent of those eligible for care in the military health care system while today they make up approximately 80 percent of the population covered by the MHSS (GAO, 2004). As hospitals closed, health care for many retirees became less accessible, with appointments at military hospitals and clinics more difficult to obtain. Simply stated, the demand for health care began to exceed the system's ability to deliver it.

Two additional factors led to changes in the MHSS; the rising cost of health care and the ongoing requirement to maintain a trained and ready medical corps to support the troops. Costs for medical care were rising in both the civilian and military populations due to many complex issues. Some of the major issues include:

- Growth of technology – new diagnostic procedures, new machines, new treatments. Once technology is developed, it drives up demand for its use, known as the research imperative;
- Increased utilization – people are taking more responsibility for their health and seek health care at a greater rate than ever before;
- Increase in elderly population – specifically, in the case of the military, a larger retired population versus active duty population has put new demands on the MHSS due to the fact that elderly people consume more health care than younger people;
- Medical Model of health care delivery – emphasizes medical interventions after a person has become sick and plays down prevention and lifestyle behavior changes to promote health (Shi & Singh, 2004).

While providing health care during peacetime is an important mission, the number one priority of the MHSS is to support emergency operations. A new approach was necessary to meet

peacetime demands for health care whilst sustaining the skills of the active duty medical corps to deploy and support military men and women on operational missions.

Responding to the Health Care Challenge – TRICARE

The 1980s doubling of military health costs and the increasing anxiety by beneficiaries about access to care in military hospitals led the DoD to launch its nationwide managed care program, called TRICARE (GAO, 2004). TRICARE is the DoD's integrated health delivery system that emphasizes improving performance and ensuring the most effective operation of the military health care mission. This secures readiness through a fit and healthy force that is ready to fight whenever called upon; and to provide healthcare for the military beneficiaries. TRICARE was managed by a senior military health care officer, called the Lead Agent, in each of 14 geographical regions in the U.S., Europe and the Pacific (see Appendix A). TRICARE brought together the health care resources of the Army, Navy and Air Force and improved them with networks of civilian health care professionals to provide better access and high quality service while maintaining the capability to support military operations (GAO, 2004).

TRICARE offers a triple-option health benefit. The first is TRICARE Prime, an HMO in which all care is provided in MTFs or by a network of civilian providers. All active duty personnel are automatically enrolled in Prime and receive most of their care in the MTFs. Beneficiaries who choose not to enroll in TRICARE Prime are eligible for MTF care on a space-available basis and have two options for civilian care: TRICARE Extra, a preferred provider network offering discounted fees; and TRICARE Standard, a fee-for-service option, formally known as CHAMPUS. These civilian-care options are provided to retirees and their dependents until they become eligible for Medicare at age 65. Medicare then replaces TRICARE as the payer for civilian care, but these beneficiaries remain eligible for MTF care so long as there is space available. TRICARE Extra and

Standard were mentioned for informational reasons only. For the purpose of this study the author will concentrate on the effects of access on Prime patients.

TRICARE was implemented throughout the U.S., Europe and the Pacific as a way to:

- *improve overall access* [italics added] to health care for beneficiaries
- provide faster, more convenient access to civilian health care
- create a more efficient way to receive care
- offer enhanced services, including preventive care
- provide choices for health care
- control escalating costs

In 2004, TRICARE transitioned from 12 regions and 7 contractors stateside to 3 regions and 3 contractors to better meet the health care needs of TRICARE beneficiaries (see Appendix B). The new contracts were phased in from June through November 2004. The new regional contractors are TriWest Healthcare Alliance (West), Health Net Federal Services, Inc. (North) and Humana Military Healthcare Services, Inc. (South).

Each of these three regional contractors helps coordinate medical services available through the MTF and through a network of civilian hospitals and providers. By combining regions and redefining various other contracts (retail pharmacy, TRICARE for Life and others), all known as the next generation of contracts (TNEX), TRICARE was seeking to improve access to quality health care and simplify administrative processes (GAO, 2004).

With fewer regions, portability improves because there are fewer opportunities for confusion about your health care region when you move from one state to another or to an overseas destination. Ultimately, the new TRICARE contracts provide added value to the uniformed services health

benefit through health services in MTFs and access to the highest quality civilian providers and institutions when MTFs are not available.

Throughout the evolution of the MHSS, from CHAMPUS to TRICARE to T-NEX, one overarching theme continuously guided this transformation, access. With the TRICARE program came system-wide access standards to military health care. One of the basic tenets of TRICARE Prime is that all enrollees have a PCM or team of managers, which ensures the continuity of care for each beneficiary (Chapman, 1995). Many MTFs have completed restructuring initiatives to improve their capability to receive primary care patients by increasing their primary care access portals. All enrollees have a PCM, which increases medical oversight and continuity of care. One of the principles of managed care directs that care is provided by the most medically appropriate, qualified provider to each patient at the right time and at the right place.

Sounds like Marcus Welby Medicine

There was a time in the Annals of Medicine when the most famous doctor in America was Marcus Welby. Marcus Welby, M.D. was a popular 1970's television show. The show aired in 1969 and ran through 1976. He was the epitome of the ideal family physician to millions of Americans who watched him on television. A poll conducted by the Wall Street Journal in 1989, asked adults nationwide the question, "If you had to choose one TV show doctor as your doctor, who would you choose?" Amazingly, 21% of those polled selected Marcus Welby, M.D. as their choice. It is remarkable considering the TV program had been off the air for over 13 years at the time of this survey. He was caring, wise, and one of the most trusted members of his community. His benevolent behavior towards his patients was established in the show's first episode, when the holistic Dr. Welby said, "We don't treat fingers or skins or skulls or bones or lungs…We treat people."

In the time of "Marcus Welby Care," a patient who became ill would visit their Marcus Welby in his private medical office. Dr. Welby would spend as much time as necessary to make an initial diagnosis and recommend a treatment. If the patient was not too sick, the Dr. Welby would send him or her home with a word of encouragement and might even call later to check on the recovery. If the patient was seriously ill, Dr. Welby would make a referral to a specialist or suggest that the patient be admitted to the local hospital. Dr. Welby remained a devoted supporter for the patient throughout treatment

TRICARE's PCM by Name (PCMBN) program emulates the concept of Marcus Welby medicine. TRICARE implemented PCMBN in 1999. This initiative ensures that each patient is assigned to an individual provider, a PCM, instead of a larger team of providers. Emphasis is placed on having most of the care provided by their own provider who will provide primary supervision and ensure the level of care provided is of the highest quality. The goal is to provide continuity of care for each enrollee and to allow providers and their teams to better manage their practice by knowing who their patients are (TRICARE Online, 2001).

CO's Marcus Welby Initiative

The CO arrived from Naval Hospital Camp Lejeune (NHCL) where he, as XO, had implemented the command's innovative strategies towards improving access for their Prime patient population. NHCL, at that time, was seeing record highs in their ED utilization rates (see Figure 5). Through a detailed analysis of the situation, poor access to a PCM was revealed as a major factor in the reason why Prime patients were defaulting to the ED. With a few calculated changes, NHCL was able to lower their ED usage by 57% (see Figure 6), with the overarching objective being, "move the Prime patients back to their appropriate primary care setting." The CO branded this concept of improving access, "Marcus Welby Care."

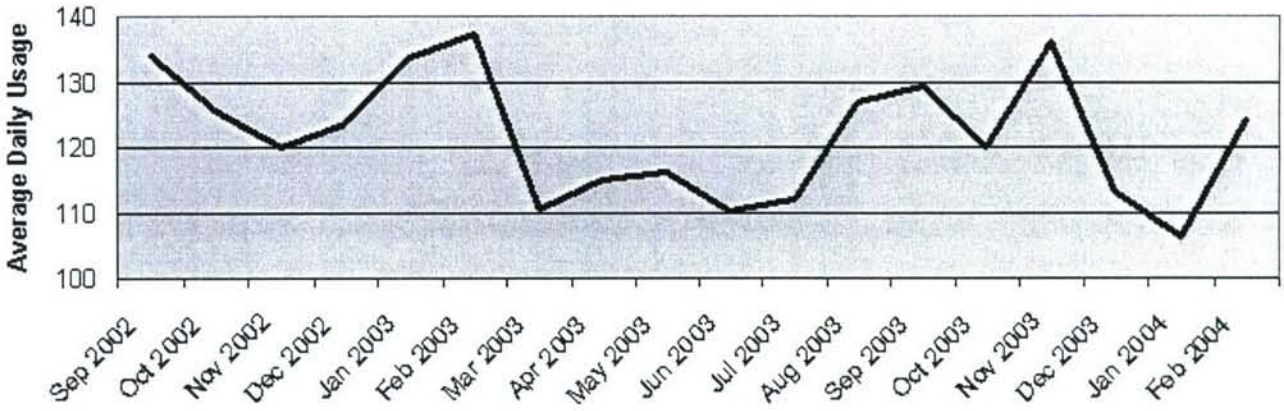


Figure 5. Naval Hospital Camp Lejeune ED visits.

Data retrieved from Summarized Management Analysis Resource Tool (SMART) on November, 2005.

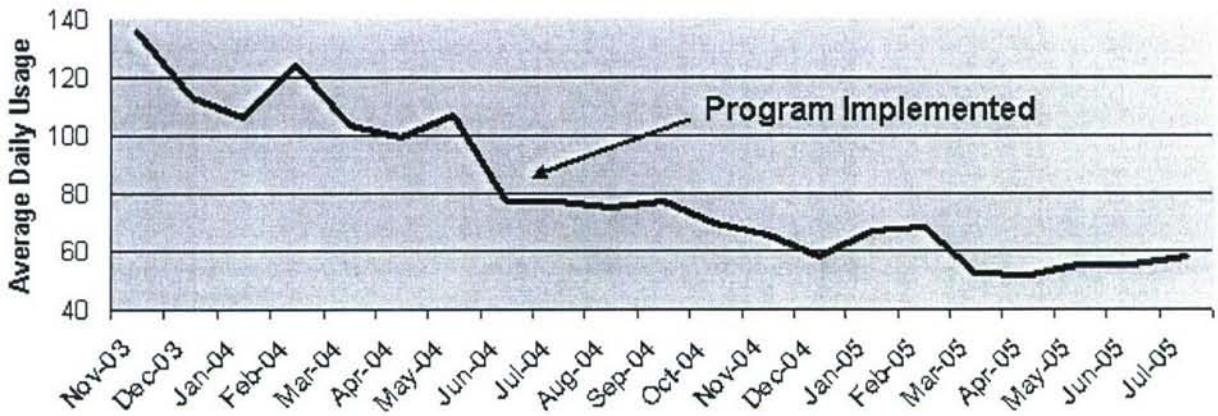


Figure 6. Naval Hospital Camp Lejeune ED visits post HSC implementation.

Data retrieved from Summarized Management Analysis Resource Tool (SMART) on November, 2005.

The CO's vision for NHCP's Prime population emulates what was expected of Marcus Welby by his patients. The CO expects that Prime enrollees will receive all their care needs through their PCM or team, except for emergency care. Sometimes the PCM team nurse or other support staff member will provide the needed services for the patient. The PCM may refer his patient to a specialist for consultation or care, but the patient would go back to their PCM for follow-up care. Sometimes the PCM will refer the patient for other supportive services; like case management,

social work, physical therapy, and weight management, but the PCM will provide or coordinate, and follow up on all the health care needs for their Prime enrollees.

Once onboard, the CO assembled a tiger team to understand what NHCP's current practices were and identify what areas were negatively affecting access. The team's primary purpose was to assess the system and come up with viable courses of action for improvement. Their ultimate goal was to provide NHCP Prime beneficiaries the ability to access their PCM and receive medical care with their assigned clinic or team in a timely and efficient manner, while decreasing the number of non-urgent patients seeking care in the ED. Various factors considered included: (1) establishing a Health Service Center (HSC), a one-stop shop for patients who need services, but have difficulty navigating NHCP's system, (2) realigning existing hospital resources, (3) improving convenient access to primary care services, (4) ensuring patients see their provider or team, and (5) eliminating the need to use the ED for non-emergency care.

Leadership Buy-in

Since the issue of primary care delivery was the focus, there were numerous stakeholders with a vested interest on the potential outcomes of this inquiry. With this in mind, the tiger team was comprised of both clinical and administrative staff to better ensure a proper representation from all personnel that could be affected from a change in access policies. The team consisted of representatives from the primary care access portals, to include: Family Medicine, Internal Medicine, and Pediatrics. Other members included the Directors for Administration and Ancillary Services, and the Deputy Director of Clinical Services who also wears the hat of the Senior Nurse Executive (SNE). Finishing out the team were individuals from Case Management and Patient Administration, the Division Officer for the ED and the Department Heads from the Appointment

Center, ED, and the Health Services Support Department. This quasi melting pot of professionals would ensure that all affected areas of the hospital had a voice.

At first the team met daily to discuss what direction the team was going to proceed with this mission. Working groups were deployed in all directions to get an accurate pulse of NHCP's access problems. The principle areas of interest were the appointment center, ED utilization, enrollment issues, the primary care clinics, and the establishment of an HSC.

The team reported directly to the Executive Steering Council (ESC). The ESC, comprised of hospital executives to include the CO and XO, assisted with removing barriers and providing ongoing executive support. Support from top management was essential to making the necessary changes. Without this support from senior management, the rest of the organization would not be able or willing to cut across the organizational barriers that normally pose an obstacle for success.

Why reinvent the wheel

In November 2005, the CO sent a portion of the tiger team to NHCL to "steal with rat-like cunning" the processes that were implemented to improve their access. The team had numerous meetings with key personnel to include the Department Heads from: Family Practice, Internal Medicine, the HSC, the ED, patient relations, and the call center. Other key individuals included: nurses from Family Practice, the call center triage nurse, and the clerk supervisor. The team spent two days learning what challenges NHCL had faced implementing its HSC and what they might do differently if they were going to establish one today. The team returned to NHCP with a clearer understanding of the CO's expectations.

Tiger Team's Evaluation

NHCL was very forthcoming with information regarding the challenges they faced with their HSC implementation. The knowledge obtained from NHCL was helpful in the planning stages of

NHCP's HSC. One of the key concerns discussed was the placement of the HSC. Due to space constraints, NHCL's HSC is located on the 1st floor while their ED is located on the 2nd floor. This separation created problems with communication and the ability to perform a warm hand-off of the patient when needed between these areas. Discovering the significance of the HSC placement allowed NHCP to properly locate the service in close proximity to the ED.

An asset to NHCL's system is the location of their call center. It is located in their HSC. This central location allows for immediate communication between the HSC RNs and the appointment clerks. When a clerk cannot fulfill the needs of the patient, a warm hand-off to the nurse is seamless. Unfortunately, NHCP does not have the space available to place the call center within the HSC.

Overview of Naval Hospital Camp Pendleton

NHCP is located on Marine Corps Base Camp Joseph H. Pendleton, the nation's busiest military base. NHCP is a 123 bed facility, overlooking Lake O'Neil and is located approximately 10 miles from the main gate at Marine Corps Base, Camp Pendleton, CA. The Base is located on a federal preserve in sunny Southern California approximately 35 miles north of San Diego and 100 miles south of Los Angeles. Camp Pendleton covers over 125,000 acres and approximately 200 square miles of terrain.

NHCP is fully accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The hospital employs approximately 2,500 military, civilians and contract personnel. The hospital along with twelve branch medical clinics is responsible for providing superb service to 39,600 Prime enrollees and over 200,000 beneficiaries overall.

The primary mission of NHCP is to ensure operational readiness of uniformed members and to provide primary and specialty care to them and to their families. The Naval Hospital and its Branch Medical Clinics provide care for active duty and retired personnel and their dependents

residing in the Camp Pendleton and adjacent area. There are 278 providers on the medical staff, in addition to 34 resident training billets in Family Practice.

NHCP encompasses the core hospital and several outlying clinics onboard Marine Corps Base Camp Pendleton, Marine Corps Air Station Yuma AZ, Marine Corps Logistic Base Barstow, and Mountain Warfare Training Center Bridgeport. These clinics are spread out over an area of 82,000 square miles. Onboard Marine Corps Base Camp Pendleton, four branch clinics are staffed and supported by the Naval Hospital. In addition, six Marine Corps medical clinics are supported by the Naval Hospital and staffed by 1st Marine Expeditionary Force and subordinate commands' medical staff. Today, as in the past, Camp Pendleton's mission has remained the same -- to maintain combat ready units for expeditionary deployment. Camp Pendleton is the home of 1st Marine Expeditionary Force, 1st Marine Division, 1st Marine Logistics Group and many tenant units, including elements of Marine Aircraft Group 39 and Marine Corps Tactical Systems Support Activity (MCTSSA).

NHCP's Access System (Pre-HSC implementation)

The following areas will be impacted by the changes presently taken place at the command. Providing some insight into their current operations should help provide a baseline from which to compare once the changes have been implemented. The following narratives describe the command via status quo.

Primary care

The primary care clinics are the entry points into the military medical system. Generally the patient is enrolled via TRICARE to a PCM. PCMs work at the various Primary Care clinics throughout the hospital and surrounding branch clinics. When the patient needs medical attention, they contact their Primary Care clinic for an appointment.

NHCP utilizes three hospital based clinics and its branch clinics to provide access into its primary care system, which include; the Family Medicine Clinic, the Internal Medicine, and the Pediatrics Clinic. These clinics are designed to provide enrolled patients (TRICARE Prime) with all their primary care needs. If specialty care is warranted, a referral is obtained from their PCM.

Family Medicine Clinic

The Family Medicine Clinic serves a population of patients that range in age from 0-100+, encompassing care for Pediatrics, Adults, Geriatrics, and OB patients. It is the largest clinical department at NHCP and boasts the largest Navy family practice residency program. Currently, Family Medicine has 11 Staff physicians, 7 Nurse Practitioners (NP), 1 Physician Assistant (PA), and 34 residents. The Family Medicine Clinic is located on the ground deck next to the pharmacy. The clinic is divided into 5 teams and utilizes a team approach. Therefore, if the PCM is not available, another provider on that team can provide quality care for the patient.

Residents rotate on a monthly basis to various departments in the hospital and to outside medical centers. This ensures the well-rounded experience needed to practice family medicine. Their current empanelment is 16,500 patients. The normal hours of operation are 0800-1630, Monday through Friday, with a late clinic operating from 1630-2000, Monday through Thursday.

Internal Medicine Clinic

Internal Medicine (IM) is a primary care specialty that serves the adult patient population of 18 years and older. Currently, Internal Medicine has 9 physicians, 2 NPs, 1 RN, and 4 LVNs. Their purpose is to provide quality wellness, patient education, and healthcare services to NHCP's beneficiaries either in the role of PCM or as a consultant provider. Their current empanelment is 3,700. The normal hours of operation are 0800-1630, Monday through Friday.

Pediatric Clinic

The Pediatric (PEDS) clinic provides comprehensive primary care for children and adolescents and clinic based immunization and allergy services. Currently, the Pediatric staff includes 10 physicians, 3 NPs, 5 RNs, and 6 LVNs. Inpatient Services consists of a 6-bed level II moderate care nursery and a 4 bed children's ward. Their current empanelment is 7,000. The normal hours of operation are 0800-1630, Monday through Friday.

Emergency department

NHCP boasts a level III ED offering emergency care 24 hours a day, with at least one physician available in the ED at all times. The ED exists for the immediate treatment of life threatening, limb threatening, or other serious illnesses or injuries. In order to be in compliance with JCAHO level III standards, specialty consultants for admission or referral must be available within a reasonable amount of time. Measures and procedures for the transfer of stabilized patients must be prearranged and available (Nold, 2006). The mission of the ED is to provide a medical assessment and, when needed, medical treatment for every patient that presents. Radiology and clinical services are available at all times.

All patients first report to the reception desk in the waiting room for initial evaluation and registration. Next, they meet with the triage nurse, who performs vital signs and determines their acuity level. Patients are seen on a priority basis established by the ED staff. The criteria used for establishing this priority include: medical condition, available space for specialized treatment, and efficient utilization of human resources.

NHCP currently uses the Emergency Nursing Association's (ENA) 5 Tiered Triage System. The system is based upon acuity but more heavily on medical resources required to treat the patient. The breakdown is as follows: Level I - patient unconscious, unresponsive, intubated, apneic,

or pulseless; Level II - high risk situation, confused, lethargic, disoriented, severe pain or distress, dangerous vital signs; Level III - stable vital signs, two or more resources; Level IV - stable vital signs, one resource; and Level V - stable vital signs, no resources. Resources are defined as a battery of examinations you would perform (i.e. labs, x-ray, CT - all labs count as one resource vice each individual lab, same with x-rays). Patients presenting with either an urgent or emergent problem are brought back immediately to be seen by the triage nurse. Those patients assessed as non-emergent, level IV and V, are sent to the fast track to be seen.

Fast Track

The fast track provides services, Monday through Friday from 1400 – 2230 hours. The purpose of the fast track is to augment the ED. This center treats patients with minor illnesses and injuries, redirecting them away from the ED. Upon arrival, the non-urgent patient is referred to the fast track, a more appropriate level of care, by the triage nurse in the ED. It is located in the hallway directly adjacent to the ED (see Figure 7). The fast track staff consists of 1 NP and 2 LVNs.

Acute Care Clinic (ACC)

The ACC provides additional contracted coverage on the weekends (Saturday and Sunday) and all Federal Holidays from 0700-2300. The clinic occupies the same space and provides the same services as the fast track. Patients are able to pre-schedule appointments or are booked an appointment time. The ACC staff consists of 1 physician, 1 NP, 1 RN, and 2 LVN's.

Central Appointments

Central appointments serves a 200,000 member patient population, booking appointments for the Primary Care clinics to include: Family Medicine, Internal Medicine, Pediatrics, and eight specialty clinics offered at NHCP to include: allergy, audiology, dermatology, EMG, ENT, general

surgery/breast health, neurology, and ophthalmology. The current hours of operation are from 0630-1600, Monday-Friday.

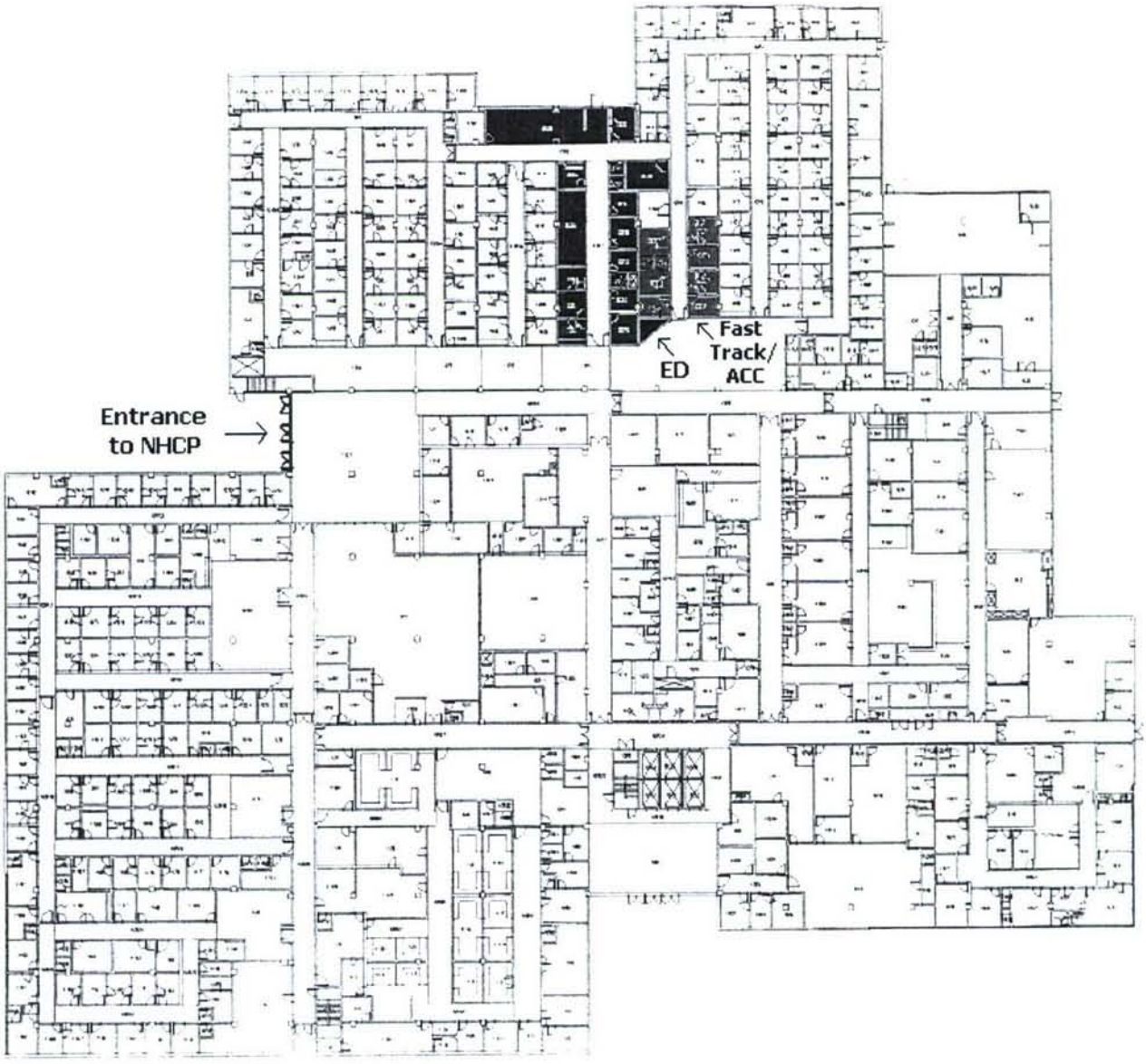


Figure 7. Diagram of first floor of NHCP.

The central appointments center is presently staffed with 5 GS/4 medical clerks and 2 RNs. The clerk's responsibilities include verifying: DEERS eligibility, TRICARE Prime status, PCM, all patient demographics, additional health benefits or carrier, and the patient's chief complaints at the time of booking the appointment. One of the nurses functions as the Division Officer and the other

contract nurse is available 40 hours per week to address patient questions/concerns and to assist with home care advice or to triage the patient's need for an appointment.

The appointment clerks will schedule, if possible, all requests for non-acute (routine, established, specialty, or wellness) appointments. If an acute appointment is needed or if a specific medical inquiry needs to be addressed, the clerk is required to refer or transfer the patient to the triage nurse. The triage nurse will then determine the type of appointment needed based on the information provided by the clerk or the information obtained from direct communication with the patient or the patient's representative.

Triage is an effective way of increasing access to care. It allows the patient to obtain the right type of appointment for their problem, and provide needed care for those patients that do not recognize the seriousness of their symptoms. Unfortunately, not all acute calls are being transferred to the nurse for a proper triage. This issue is currently being addressed.

On any given day, the appointment clerks receive approximately 850 calls in the appointment center. However, by 0730 there were no "same-day" appointments remaining for the clerks to book patients. The clerks, left with nothing else to do, advise the patients to call back the following day at 0630, or tell them to go the ED if they cannot wait to be seen. Not only did this disrupt the continuity of care, it created a scramble for appointments by patients at 0630. As a result, phone waiting times increased and patient satisfaction with access decreased.

NHCP's Access System (Post-HSC implementation)

The CO voiced his concern with regards to the numerous options utilized to access NHCP's system. He believes there should only be three routes available for patients to access the system; primary care, specialty care, and emergency care. He stated the current system was confusing to our beneficiaries and helped facilitate the discontinuity in our system.

The following descriptions will address only those areas that were directly affected by change. Some of these changes include: new and discontinued services, increased staff responsibilities, the realignment of existing staff, and the extension of clinic hours.

Health Service Center

On December 5, 2005 the HSC was placed into service. The HSC is the initial point of access to address health care needs and provide assistance with health care questions. It is a service which facilitates appropriate and timely access to healthcare for TRICARE beneficiaries. The HSC includes a telephone nurse advice line and a face-to-face nurse screening center. It is conveniently and strategically located just inside the main entrance to the Naval Hospital (see Figure 8). This location allows for maximum visibility of this new service and offers a viable alternative to the ED. It also allows for an easy move when patients are transferred from the ED to the HSC or vice versa.

Upon arrival to the HSC, a RN conducts a screening assessment to determine the individual health care needs of the patient through the use of flowcharts and a red flag list (see appendices C-G). Based on the results of the screening, the nurse will provide health care education and facilitate access to the appropriate level of care. The patient may require care in the emergency room, may be provided with an appointment in the appropriate after-hours primary care clinic with their PCM or team provider, or may be sent home with homecare education and instructions for follow-up care. The focus is on meeting the individual/family's health needs through communication and available resources. The HSC is a one-stop shop for patients who need services, but have difficulty navigating the system. The goal of the HSC is to keep patients out of the ED, a more expensive area for care, and guide them to other more appropriate care sites.

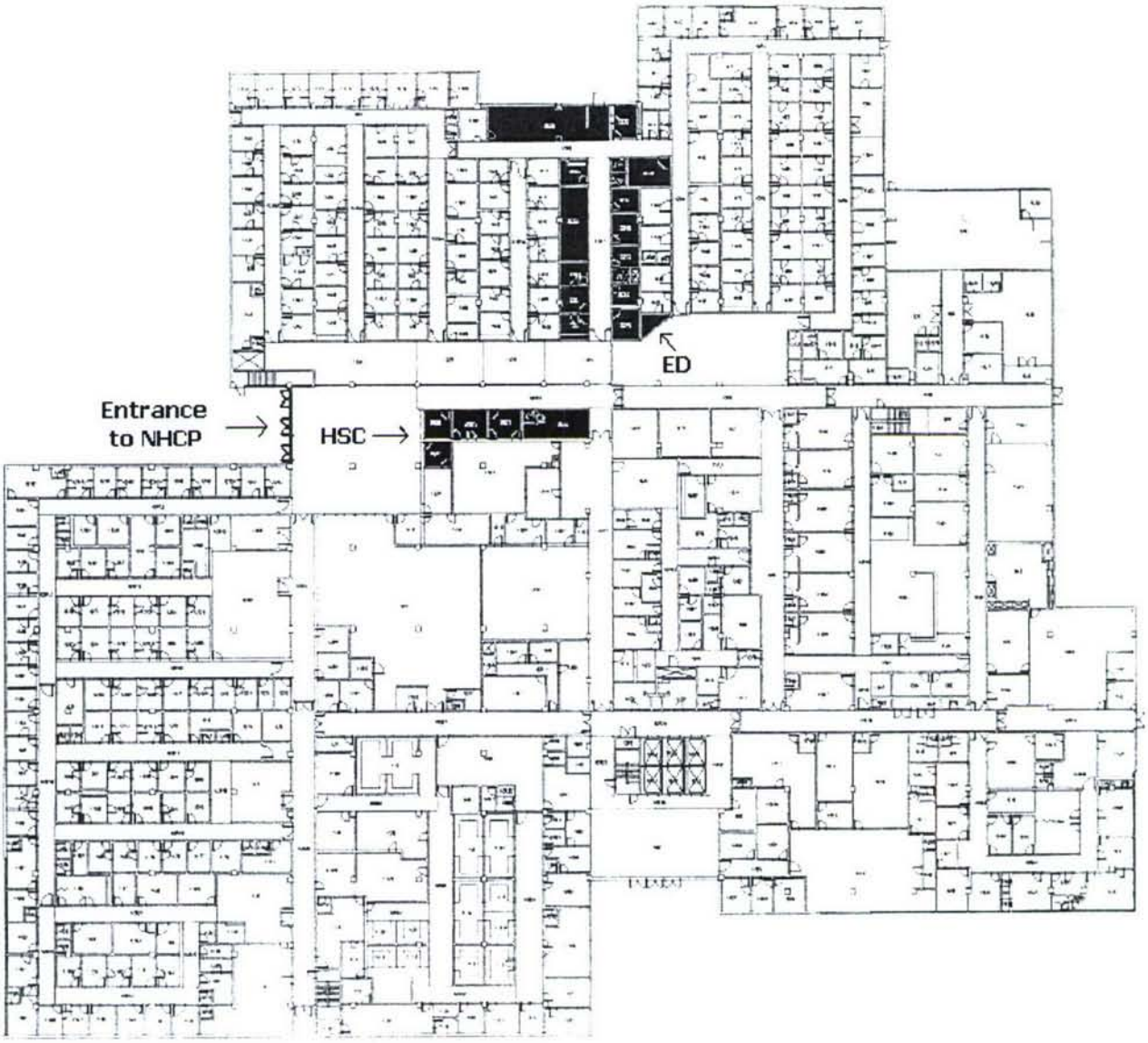


Figure 8. Diagram of first floor of NHCP.

When the HSC was initially implemented there was only enough staff to operate it from 0800-2000, 5 days a week. Existing military resources were realigned enabling the HSC to operate. On February 4, 2006, the HSC increased its service to include weekends. The HSC's current hours of operation are 0800-2000, 7 days a week. Currently, the hospital is working with its new contractor, Sterling Medical, to acquire 1 additional RN to enable the HSC to meet its staffing objective. The staffing includes 4 RNs and 2 clerks.

Primary Care

The lack of evening and weekend hours are examples of the many barriers patients face in trying to obtain the care they need. A study performed by the Leonard Davis Institute of Health Economics (2005) found that the more evening hours a practice had, the less the patients were to utilize the ED. The study also found that weekend hours were associated with lower ED use.

The hours for all the primary care clinics were extended to 2000, as well as implementing an extended consolidated primary care clinic on the weekends from 0800-2000 in the Family Practice clinic. These additional hours are currently being used for urgent appointments only. The weekend clinic is staffed by 1 military PCM, supported by the Branch Medical Clinics, IM, PEDS, and FP. The contract staff includes: 1 FNP, 1 RN, and 2 LVNs.

Emergency Department

The consensus in the ED was that the workload, due to deployments, was in excess of what the staff could handle. Presently, they feel that since the workload has adjusted down; they are much better able to handle the load. The only change in staff was a decrease in physician coverage from 4 9-hour shifts per day to 3 9-hour shifts with the help from a NP for 10 hours a day during the swing shift time period.

Fast Track/ Acute Care Clinic

The Fast Track and the ACC were closed on December 5, 2005. Staff from the fast track were reassigned to Family Practice, the IM clinic, and the HSC. The ACC staff was reassigned to provide weekend coverage to allow for the implementation of the extended primary care clinic in Family Practice.

While these services alleviated some of the strain of non-urgent patients on the ED, these services were being used as a crutch by the primary care clinics. When the clinics were unable to see

their patients, the patients were sent to one of these auxiliary services to be seen because the option was available. The CO removed this crutch by discontinuing those services and implementing the HSC. This change required the primary care clinics to take ownership of their patients.

Central Appointments

The hours of operation for the appointment center were extended to 1800, with plans in the future to increase coverage to include weekends. Due to its significance as an access point, central appointments received much needed attention. Some of the issues the tiger team found were; a high attrition rate in the clerk position, a complex booking system, and a distraught population scrambling every morning to obtain one of the few appointments that were made available. These issues were assessed and handled in the following manner.

High Attrition

The team found that the clerk position had a high attrition rate with only 5 of 10 positions filled. Understanding that this position was crucial to the success of his vision of increased access, the CO increased the compensation for this position from GS4 to GS5. He personally notified the clerks that day of their recent advancement and expressed to them how important he thought their jobs were to the organization's mission. Staffing improved to 8 GS/5 clerks. The clerk's schedules were staggered to allow for the most appropriate level of staffing during the most demanding times of the day: 4 clerks arrive at 0630, 3 at 0730, and 1 at 0930.

Booking System

The current system for booking appointments was shown to be cumbersome, time consuming, and tedious. Some of the difficulties were due to the multiple business rules for each clinic and the options the clerks had to navigate through to book an appointment. This problem created confusion in the type of appointments required for specific patient complaints with the

appropriate available provider. The Assistant Department Head for the Health Service Support Department (HSSD), Mrs. Tina White, recognized the importance of simplifying and standardizing these rules.

The main change to the booking rules was eliminating the task of booking same-day appointments from the clerks' responsibilities. The appointment center was being utilized as a gatekeeper. When the clerks were unable to book a same-day appointment for the patient, due to lack of available appointments, they would tell the patient to call back the next day at 0630 or go to the ED to be seen. The clerks were the only point of access for the patient. Interestingly, having the clinics book their own same-day appointments has increased patients access to their PCM. Even when the patient does not receive a same day appointment, they talk with a nurse who provides the patient with homecare education and reassurance, which is sometimes all the patient needs.

Patient Conditioning

Lastly, the tiger team found that, due to conditioning by NHCP's staff, the majority of calls to the appointment center occur between 0630 and 0900 (see Figure 9). This overload of calls created average waiting times of 30 minutes, with some wait times in excess of one hour. To handle this bolus of daily calls, two distinct strategies were implemented.

The first approach employed was the utilization of existing RN staff in the primary care clinics to personally triage the patient. The appointment clerks, according to the booking rules, are not allowed to book same-day appointments. Same-day appointments are booked directly through each clinic. Being that the primary care clinics do not open until 0800, there is a 1½ hour void where the clerks can not transfer the patient to the clinics to be booked for that day. To overcome this discrepancy, the appointment clerks create a telephone consultation (T-con) for all same-day requests and send them, via AHLTA, to the primary care clinic that the patient belongs. The RN in

that clinic, upon arrival, personally calls back each patient and books them appropriately. This practice places the responsibility of care for the patient where it belongs, with their clinic.

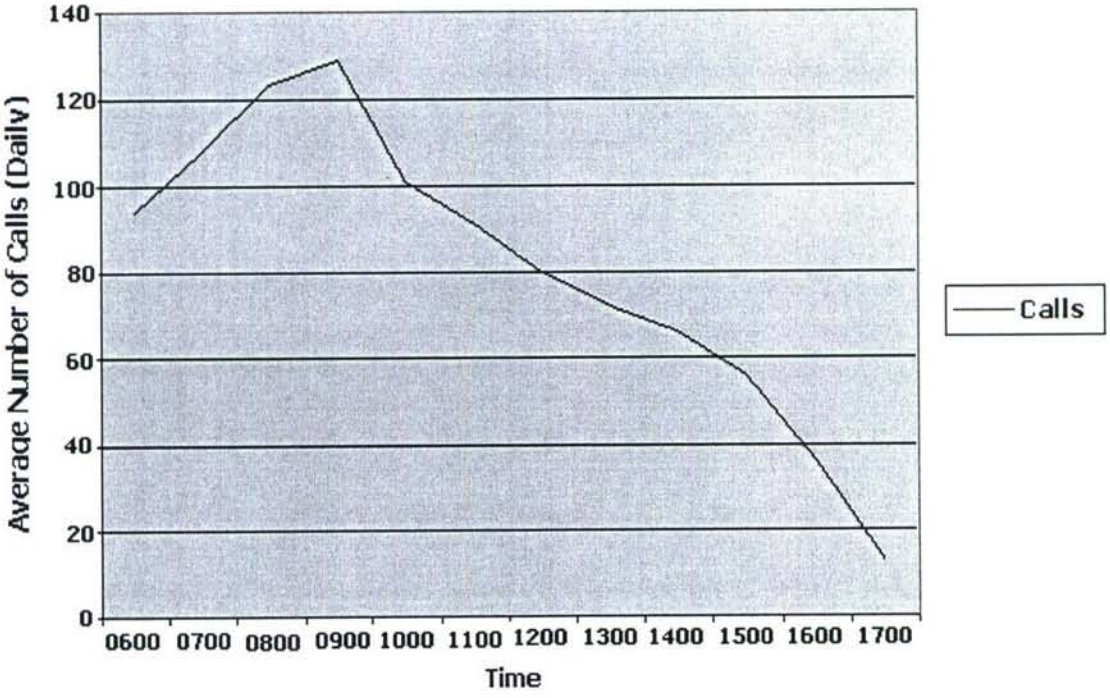


Figure 9. Call volume report 1-14 September 2005.

The second approach was to utilize a clerk from one of the primary care clinics to assist in the appointment center from 0630-0800, the hours with the highest call traffic. Upon further investigation, the team found that Mondays were historically the day of the week with the highest call volume. Once the appointment center was fully staffed, the use of this additional clerk decreased to only Mondays.

725-HELP phone line

The command was inundated with telephone numbers used to access primary care services. When the CO arrived he had different ideas on how to manage the access system. He ordered changes to the current phone system to create the 725-HELP line. The CO stated it was essential to have a minimal number of options available on the phone tree for the patients to navigate to avoid

confusion. The new phone line provides options for the patient in one convenient location (see Figure 10).

Message 1A
Welcome to the Health Services Center. This is Captain Steve Nichols, Commanding Officer of Naval Hospital Camp Pendleton. If this is an emergency, please hang up and dial 911. Otherwise, please select one of the following five options and a staff member will assist you. Thank you.

Message 2A
To make or change an appointment, press 1.
To speak with a health advice nurse, press 2.
For assistance with a specialty care referral, press 3.
For pharmacy call in prescription refills, press 4.
For other customer service assistance, press 5.

Figure 10. NHCP appointment center phone messages 725-HELP line.

While this phone service has made accessing NHCP's system easier, the transition has not been without difficulty. In the early 2000's, NHCP was being pummeled by poor phone access and patient satisfaction. The decision was made to centralize the appointment clerks and purchase an auxiliary phone system to support the appointment center, which had reporting capabilities and would provide the services missing from the current primary system. For the ease of use and reporting capabilities, the Toshiba phone system was determined to be the best solution for the requirements. The Toshiba system was unable to completely handle the changes needed to implement the new 725-HELP line; needless to say some processes were broken. Continuing to expand a system that was intended for a small business use has become a costly endeavor, because it now makes the command dependent on vendors for every change, troubleshooting, and programming issues that come along. Because this type of system was never intended for an organization of this size, NHCP has to look at solutions that will address the requirements of the entire organization, not just selected departments.

Technology has again advanced and it looks like the best solution to bring the system up to date and address future requirements is VOIP (voice over internet protocol). The IT department will

over the next couple of months be researching the cost, effectiveness, and ROI for a VOIP system. The infrastructure already exists to support the requirements.

RN Advice Line

The RN advice line is a free telephone medical advice line available to all NHCP beneficiaries from anywhere. It is the second option available on the 725-HELP line. Patients can call day or night, seven days a week to speak with a RN. The advice line is designed to give members an immediate and convenient response to their medical concerns.

The nurses utilize the McKesson triage system to provide patients with the best healthcare information possible, helping the patient attain the proper type of care. The nurses utilize an algorithm-based symptom assessment system which allows them to: direct patients to the appropriate level care, empower patients with solid information and advice to make sound healthcare decisions, recognize symptoms that could lead to hospitalization if not treated promptly. Honeycutt (1998) determined that when patients were offered quick, convenient access to medical information and advice, 77% chose not to go into the office.

The RNs staffing the triage line must have a minimum of two years triage experience in the previous three years to be qualified for the position. Currently, the call center has an RN that handles the calls from 0800-1630. At 1630, the HSC nurse covers the line until it closes at 2000 at which time the line is transferred to the ED to be manned until 0800.

Information Technology's (IT) Role

NHCP has been recognized as one of the nation's 100 "Most Wired" hospitals. This is the third year in a row that NHCP was selected by *Hospitals & Health Networks*, the journal of the American Hospital Association. Colin Archibald, the CIO for NHCP, states that "as the community becomes more comfortable with technology, the perception has become [that] technology equals the

quality of care they receive." NHCP is always improving knowledge management support of safe, quality health care. This constant quest has led to the many improvements which resulted in the hospital's ongoing "most wired" recognition.

Holding the title of "most wired" carries certain expectations. The IT department was tasked with designing and implementing an online information portal to serve as a central secure location for data sharing. This in-house portal utilized Microsoft Internet Explorer to enable all those with access, to view up-to-date, self-populated data on; ED visits (designated by arrival code, working or non-working hours, and to whom they are enrolled), ED high utilizers (with their PCM information), LWBS rates, and many other clinically relevant reports (see Figure 11). These reports have allowed those responsible for making decisions the ability to formulate educated responses by having accurate data available.

Advertising

Advertising is one of the most essential components to achieving success in a project of this magnitude. Right from the start the staff must be informed of the changes taking place in order to guarantee that all are on the same page. The CO considered it essential to ensure that everyone, if asked, would know the direction the command was heading with access and the services that would be offered. He held numerous meetings throughout the command championing his vision (see Appendices H – J). His message has been consistent from the beginning, "When our MTF Prime patients are: (1) told there are no appointments available with their PCM or team; (2) receiving primary care services from someone other than their own PCM or team; (3) treated in the ED for non-emergency care; or (4) told that we can only address one issue/problem during the visit, *we have a health system failure.*" Since individuals in the command would have dissimilar roles to play dependant on their responsibilities, the CO's briefs were specifically created for the diverse

audiences that he would be presenting (i.e., physicians, nurses, clerks, Lead Chief Petty Officers, Department Heads).

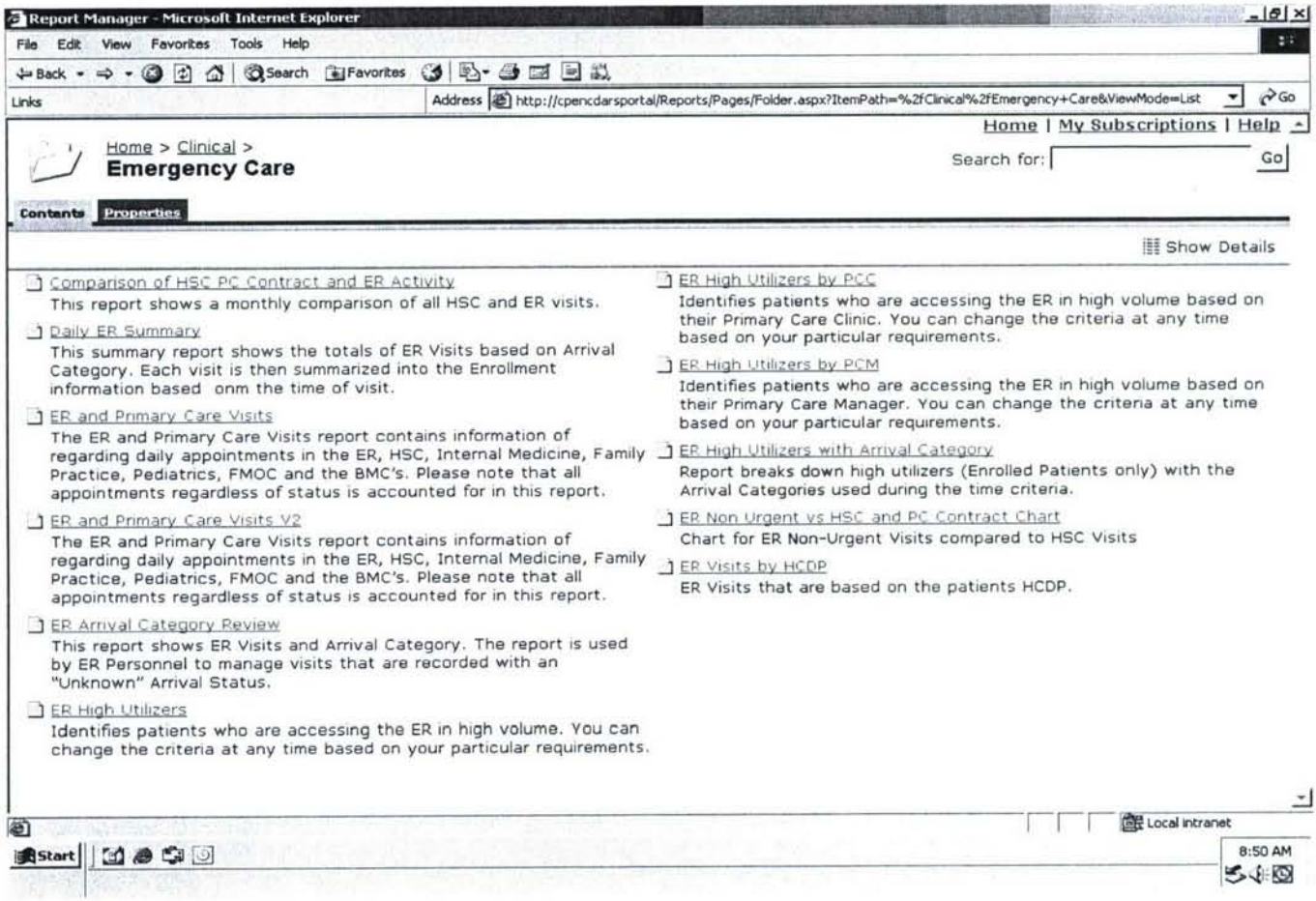


Figure 11. Screen shot of ED portal options.

The CO also stressed the importance of advertising directly to our patients. This advertising has to produce a complete paradigm shift for the patients. NHCP's beneficiaries have been trained to utilize the ED when unable to gain access to an appointment. The promotion of the HSC must proclaim the importance of this new service for access to the patient. Even though the HSC opened in early December, the ribbon cutting was not completed until late January (see appendices K–M). Evidence has shown that premature marketing and advertising only confuses beneficiaries and usually creates high or unreasonable expectations (GAO, 2004). All changes made during the

transition period should be invisible to the beneficiary. They should only recognize that their ability to get an appointment has improved.

Methods and Procedures

Unit of Analysis

The unit of analysis for this study is the Naval Hospital Camp Pendleton's non-urgent Prime patient population utilizing the ED during working hours. This population will be referred to as "Non-Urgent Prime ED Visits" for the remainder of this paper. This population includes: Active Duty Service Members (ADSM) and Active Duty Family Members (ADFM), Prime retirees and their dependants and survivors, and TRICARE Plus patients.

Data

The data utilized in the study represents 117 days, December 5 through March 31, for the Fiscal Years (FY) 2003 through 2006. The initial data set (see Appendix N) represents total ED visits for these 117 days from 2003 through 2006, and the secondary data set (see Appendix O) represents specifically, the number of Non-Urgent Prime ED Visits for the same timeframe noted above.

The data presented in this analysis was retrieved via the Composite Health Care System (CHCS). CHCS is the military's computerized provider order entry system supporting over 500 MTFs worldwide. DoD has used CHCS for over ten years to order and document laboratory tests, radiology exams, perform prescription transactions, document outpatient appointments and other care administered to patients.

Validity/Reliability

NHCP's IT department performs random sampling and verification of validity based on CHCS ad hoc report comparisons and end user knowledge of spot check verification. According to

Bill Lammie, NHCP's Senior Database Architect, the data is 97-100% accurate. The percentile of inaccuracy is usually found due to poor data quality obtained from the source system.

The data utilized to describe NHCL and Naval Hospital Jacksonville's (NHJ) average daily ED visits was retrieved from the Summarized Management Analysis Resource Tool (SMART). SMART is a decision tool using a cost tracking and analytical web-enhanced application to monitor the cost and expense of operating Navy hospitals and clinics. SMART uses data pulled from the Standard Accounting and Reporting System (STARS), work load from World Wide Reporting (WWR), ancillary work load from Composite Health Care System (CHCS), and combines them into an analytical tool.

Data Analysis

Data were analyzed using Microsoft® Excel 97. Selected descriptive statistics were compiled for the data sets of: total daily ED visits and total daily Non-Urgent Prime ED Visits for the days December 5 through March 31. Additionally, a single-factor analysis of variance (ANOVA) was employed. An ANOVA is a test of whether significant differences exist between the mean scores of two or more groups. An alpha level of .05 was used for all statistical tests. The ANOVA will test the following hypothesis:

> Null Hypothesis (Ho): All mean Non-Urgent Prime ED Visits are equal among the years
> Ho: $\mu 1 = \mu 2 = \mu 3 = \mu 4$
>
> Alternate Hypothesis (H_1): At least one mean year of Non-Urgent Prime ED Visits is different
> H_1: $\mu 1 \neq \mu 2 \neq \mu 3 \neq \mu 4$

If the null hypothesis is rejected, thus demonstrating a statistical significance in Non-Urgent Prime ED Visits, post hoc ANOVA tests will be conducted to determine if 2006 is the year that was significant from the previous years. The post hoc tests will include running a single-factor ANOVA test for each of the years 2003, 2004, and 2005, against 2006 independently.

Lastly, in an attempt to account for uncontrollable environmental change (e.g. deployments, flu), a proportion of Non-Urgent Prime ED Visits to total ED visits will be computed. Confounders are variables that can distort the statistical relationship under observation. The impact that the flu and deployments can have on the data set cannot be overlooked. The concept is that if ED visits either increase or decrease due to a confounder, Non-Urgent Prime ED Visits should increase or decrease at the same rate.

Patient Privacy

In April 2003, the Health Insurance Portability and Accountability Act (HIPAA) Privacy rule was implemented to establish minimum Federal standards for protecting the privacy of individual's protected health information (PHI). No PHI was utilized for the purpose of this study.

Results

Descriptive statistics (see Table 1 & 2) revealed an initial increase in total ED visits of 2,511 (26.5%) from FY 2003 to 2004. From FY 2004 to 2005, total ED visits decreased by 1,477 (12.3%), and further decreased from FY 2005 to 2006 by an additional 2,512 (23.9%). Non-Urgent Prime ED Visits increased from FY 2003 to 2004 by 439 (21%) visits, increased from FY 2004 to 2005 by 315 (13.1%) visits, and decreased from FY 2005 to 2006 by 1,138 (47%) visits.

Table 1.

Descriptive Statistics for Total ED Visits

December 5 – March 31	n	M	SD
FY 2003	9,469	80.93	17.38
FY 2004	11,980	101.87	27.59
FY 2005	10,503	89.77	19.30
FY 2006	7,984	68.24	12.09

Table 2.

Descriptive Statistics for Non-Urgent Prime ED Visits

December 5 – March 31	n	M	SD
FY 2003	1669	14.26	10.51
FY 2004	2108	18.02	13.41
FY 2005	2423	20.71	14.35
FY 2006	1285	10.98	7.9

An ANOVA test performed on Non-Urgent Prime ED Visits for FY 2003 through FY 2006 found that mean visits were statistically different among the years, with $F(3, 467) = 15.19, p < .01$. Post hoc ANOVA tests for Non-Urgent Prime ED Visits indicated highly statistically significant results (see Table 3) for FY 2003 versus FY 2006 with $F(1, 233) = 7.29, p < .01$, for FY 2004 versus FY 2006 with $F(1, 233) = 23.89, p < .01$, and FY 2005 versus FY 2006 with $F(1, 233) = 41.23, p < .01$, respectfully.

Table 3

Analysis of Variance for Non-Urgent Prime ED Visits

December 5 – March 31	*df*	F	*p*
FY 2003	232	7.29*	.007
FY 2004	232	23.89*	.00
FY 2005	232	41.23*	.00

Note. * $p < .01$.

The results of the proportion analysis (see Table 4) reveal no difference in the proportion of Non-Urgent Prime ED Visits to total ED visits from FY 2003 to 2004. Surprisingly, from FY 2004 to 2005, total ED visits decreased by 20%, while Non-Urgent Prime ED visits increased 12% resulting in a 5.47% increase in the proportion rate. However, from FY 2005 to 2006, total ED visits decreased by 24% and Non-Urgent Prime ED visits decreased by 47% resulting in a 7% decrease in the proportion rate.

Table 4

Proportion of Non-Urgent ED Visits to Total ED Visits

December 5 – March 31	Non-Urgent Prime ED Visits	% Change	Total ED Visits	% Change	Proportion of Non-Urgent ED Visits to Total ED Visits	% Change
FY 2003	1,669	--	9,469	--	17.63%	--
FY 2004	2,108	20%	11,980	21%	17.60%	**-.03%**
FY 2005	2,423	13%	10,503	**-12%**	23.07%	5.47%
FY 2006	1,285	**-47%**	7,984	**-24%**	16.09%	**-6.98%**

Note. Data retrieved from CHCS on January, 2006. Proportion rates are a result of Non-Urgent Prime ED Visits/ Total ED Visits.

Discussion

TRICARE beneficiaries deserve improved access and commands should focus their efforts on meeting the patient's needs in timeframes that are convenient for the patient. An effective, accessible primary care system is important in improving health outcomes, keeping health costs down, and helping people lead healthy, productive lives. Young, et al. (1996) stated that inaccessible systems for primary care are frequently cited as the most common reason for use of emergency services. The lack of available primary care physicians is significantly associated with ED use. Despite strong desires to use outpatient care, approximately 50% of the population that receive non-

urgent care in the ED describe at least one failed attempt to find care elsewhere (Lucas and Sanford, 1998).

NHCP is a prime example of this problem. The problem with access is evident by the fact that 60% of the non-urgent Prime patient visits to NHCP's ED in FY 2005 occurred during working hours. The CO developed the HSC to combat this problem. The results indicate that the implementation of the HSC has decreased total ED visits, and more importantly has decreased the use of the ED during working hours by non-urgent Prime beneficiaries.

This dramatic decrease in ED visits cannot be understated. From FY 2003 to 2005, total ED visits increased over 10%, while Non-Urgent Prime ED Visits increased over 22%. After the implementation of the HSC, total ED visits decreased by 24% and Non-Urgent Prime ED Visits decreased by an amazing 47%. In fact, FY 2006 was the only year showing a decline in both Non-Urgent Prime ED visits and total ED visits (see Figure 13). These numbers illustrate that the HSC has made a significant change in the way that the ED is being utilized. Patients want easy, quick access to a source of care, so when they are presented with one, they will utilize it.

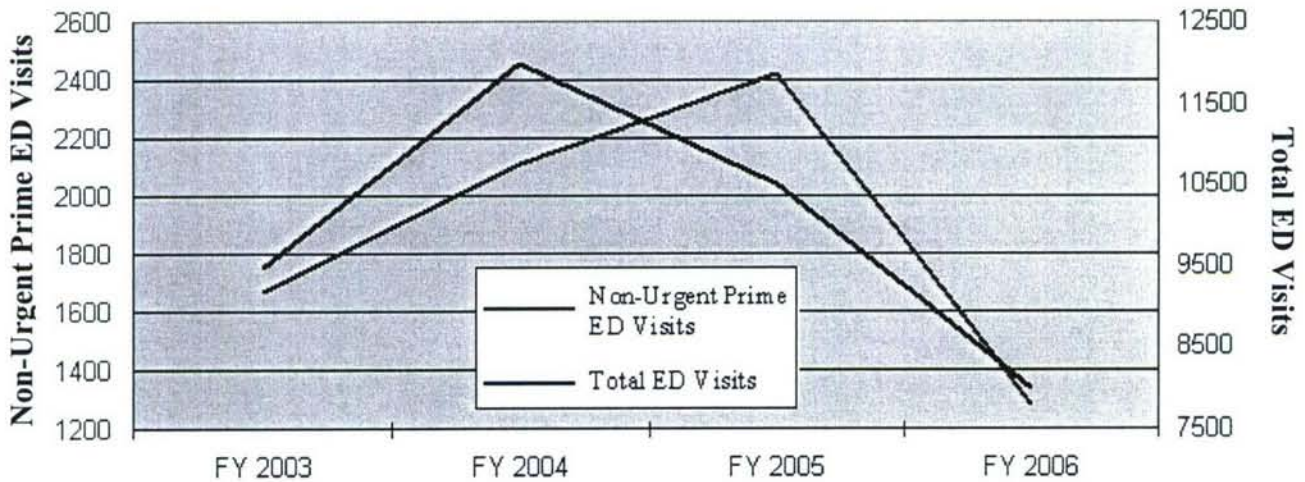


Figure 12. Comparison of Non-Urgent Prime ED Visits and Total ED Visits

Limitations

Due to time constraints for the completion of this study, only 117 days (December 5 through March 31) of data were collected. For this reason, only data for the same 117 days of 2003, 2004, and 2005 were analyzed. While the statistics substantiate the beneficial effects derived from the HSC implementation, a future analysis would be recommended to assess if NHCP's HSC will continue to have the positive results noted during this brief period.

While the purpose of the HSC is to decrease Non-Urgent Prime ED Visits, there are instances when its use is reasonable. Although Prime patients seen in the ED represent a health system failure, there are patients whose problems justify their need to be seen in the ED regardless of their arrival category. These individuals include those who have received trauma in the last 24 hours, referred by a General Medical Officer (GMO) at an outlying clinic that cannot provide the appropriate care, a patient with an eye injury, all complaints of abdominal pain (considered potential appendectomy), and GYN (bleeding/cramping) complaints. These specific problems could quickly progress into either an urgent or emergent issue necessitating emergency care. For this reason, as noted in the research question, there is no expectation to completely eliminate the usage of the ED by Non-Urgent Prime ED Visits.

Lastly, it would be ideal to be able to directly measure the impact the HSC is having on access and quality. Being that the HSC is just an information center and does not generate visits, it lacks the usual means of assessing productivity. It is difficult to establish how many primary care visits were saved for more appropriate patients or how many patients choose not to use the ED because of the availability of the RN triage advice line.

Recommendations

Results from this study have revealed the benefits achievable from the implementation of a HSC. NHCL introduced its HSC in June 2004. After the first four months of operation, NHCL experienced an impressive 30% decrease in ED visits. Seventeen months later, ED visits have decreased an additional 15%, for an overall decrease of 45% since its inception. Similarly, NHCP experienced a 24% decrease in ED visits during its first four months of operation.

Given the results from this study it is prudent that other DoD hospitals experiencing access problems and overcrowded EDs look at this concept as a potential solution to their problems. NHJ is one example of a hospital currently experiencing excessive use of its ED (see Figure 12). NHJ, as well as others having these same ED issues, should utilize the HSC concept to increase access for their beneficiaries.

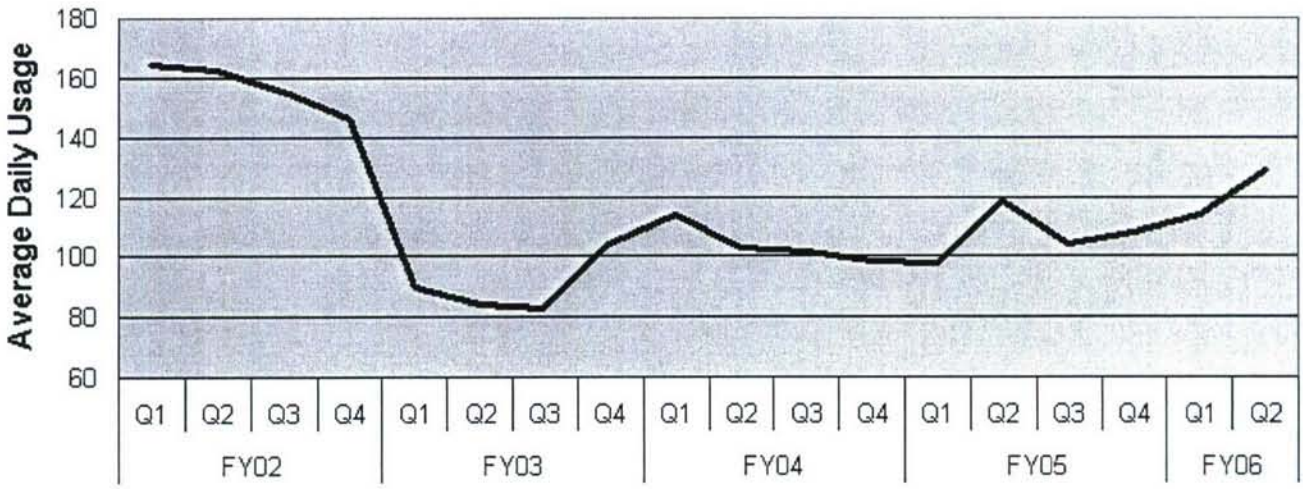


Figure 13. Naval Hospital Jacksonville ED visits.

Note. Data retrieved from Summarized Management Analysis Resource Tool (SMART), April 2006.

Conclusion

William Winkenwerder Jr., the Assistant Secretary of Defense for Health Affairs, stated (2005) that access to care for our beneficiaries is a top priority of the Military Health System (MHS).

The use of the ED for non-urgent conditions is a consequence related directly to the difficulties in accessing primary care. The misuse of the ED as a walk-in clinic at NHCP has brought this problem of access to light.

The research question studied is, Will the implementation of a "patient-centered" approach to primary care with the institution of extended primary care hours and a Health Service Center, decrease the number of non-urgent, Prime patients seen in the ED during working hours.

Based on the results from the study, the null hypothesis was rejected in favor of the alternate hypothesis. This study found that the HSC had a positive impact on decreasing the amount of non-urgent Prime patients utilizing the ED during working hours. The needs of the patients should be central. They should be offered prompt high-quality care when and where they need it. In order to help realize this vision, new services to increase access in primary care have been introduced. These initiatives have the potential to improve accessibility to health care for all of NHCP's beneficiaries. The new services will allow emergency room staff to focus their attention and resources on those in greatest need of the specialized care offered in the ED. It also affords our staff the ability to direct those who do not need emergency services to other, more appropriate places for care.

This paper does not have all the answers to implementing an HSC or improving access at a facility, it is only a start. There is no "cookie cutter" approach to successfully implementing a project of this magnitude or to developing/sustaining improved access to care for beneficiaries. This project provides evidence of the influence of redesigning healthcare by addressing multiple areas of the healthcare system. NHCP's work in each area of focus reflects vision, persistence, and an unwavering consideration to the voice of its patients.

Glossary

Appointment Standardization Integrated Program Team (ASIPT) - comprised of representation from the Service Surgeons General Offices, TRICARE Lead Agents, and MCS Contractors, is developing methodologies and implementation plans for standardizing the appointment types and other data elements within the MHS' Composite Health Care System (CHCS). The ASIPT is also charged with the responsibility for establishing MHS appointment processing business rules.

Base Realignment and Closure Commission (BRAC) - congressionally authorized process DoD has previously used to reorganize its base structure to more efficiently and effectively support our forces, increase operational readiness and facilitate new ways of doing business

Benchmark - A goal to be attained. These goals are chosen by comparisons with other providers, by consulting statistical reports available or are drawn from the best practices within the organization or industry. Benchmarks are used in quality improvement programs to encourage improvement of care, efficiencies or services. Benchmarks are also used for length of stay comparisons, costs, utilization review, risk management and financial analysis. The benchmarking process identifies the best performance in the industry (health care or non-health care) for a particular process or outcome, determines how that performance is achieved, and applies the lessons learned to improve performance.

Beneficiary – A person who is eligible for TRICARE benefits. Includes active duty service members, active duty family members, retired service members and their families. Family members include spouses and unmarried natural or stepchildren up to the age of 21 (or 23 if full-time students at accredited institutions of learning.

Catchment area - used to define the geographic area surrounding an MTF with inpatient capabilities, where an inpatient Non-Availability Statement is required for non-enrolled beneficiaries. Under TRICARE, a catchment area is also used as a planning tool to identify the eligible population, and define areas where managed care support contractors must offer the TRICARE Prime benefit.

Centers for Disease Control and Prevention (CDC) – The federal public health agency in the United States.

CHAMPUS -The Civilian Health and Medical Program of the Uniformed Services. CHAMPUS is a federally-funded health program that provides beneficiaries with medical care supplemental to that available in military and Public Health Service (PHS) facilities. All CHAMPUS beneficiaries move over to Medicare at age 65. CHAMPUS is like Medicare in that the government contracts with private parties to administer the program.

Chronic disease – A medical condition that persists over time. Chronic diseases may lead to a permanent medical condition that is nonreversible and/or leaves residual disability.

Continuity – refers to care over time by a single individual or team of health professionals ('clinician continuity') and to effective and timely communication of health information (about events, risks, advice, and patient preferences)

DEERS – Defense Enrollment Eligibility Reporting System is a computerized database of military sponsors, families and others worldwide who are entitled under the law to TRICARE benefits. DEERS registration is required for TRICARE eligibility.

Defensive medicine - Medical practices designed to avert the future possibility of malpractice suits. In defensive medicine, responses are undertaken primarily to avoid liability rather than to benefit the patient. Doctors may order tests, procedures, or visits, or avoid high-risk patients or procedures primarily (but not necessarily solely) to reduce their exposure to malpractice liability. Defensive medicine is one of the least desirable effects of the rise in medical litigation. Defensive medicine increases the cost of health care and may expose patients to unnecessary risks.

Emergency department (ED) – Hospital facilities for the provision of unscheduled outpatient services to patients whose conditions require immediate care. Must be staffed 24 hours a day.

Emergency - TRICARE defines it as a medical, maternity, or psychiatric emergency that would lead a "prudent layperson" (someone with average knowledge of health and medicine) to believe that a serious medical condition existed, or the absence of medical attention would result in a threat to his or her life, limb, or sight, and requires immediate medical treatment, or which has painful symptoms requiring immediate attention to relieve suffering.

Emergency Medical Treatment and Labor Act (EMTALA) - An act pertaining to emergency medical situations. EMTALA requires hospitals to provide emergency treatment to individuals, regardless of insurance status and ability to pay.

Enrollee – A TRICARE eligible beneficiary who has elected to enroll in TRICARE Prime, TRICARE Prime Remote, or TRICARE Prime remote for Active duty Family Members.

Family medicine – A branch of medical practice based on a core of knowledge that prepares the family physician to function as the primary provider of health care and to perform the roles of patient management, problem solving, counseling, and coordination of care.

Government Accounting Office (GAO) - exists to support the Congress in meeting its Constitutional responsibilities and to help improve the performance and ensure the accountability of the federal government for the benefit of the American people

Institute of Medicine (IOM) - A nonprofit organization. The Institute provides a vital service by working outside the framework of government to ensure scientifically informed analysis and independent guidance. The IOM's mission is to serve as adviser to the nation to improve health. The Institute provides unbiased, evidence-based, and authoritative information and advice concerning health and science policy to policy-makers, professionals, leaders in every sector of society, and the public at large.

Joint Commission on Accreditation of Healthcare Organizations (JCAHO) - An independent, voluntary, not-for-profit accreditation body sponsored by the American College of Physicians, the American College of Surgeons, the American Hospital Association, the American Medical Association and the American Dental Association. The JCAHO conducts accreditation surveys for hospitals and other healthcare organizations.

Lead Agent – The lead agent office is the responsible organizational entity and designated uniformed services focal point for supporting contract administration in a specific TRICARE region. The lead agents are responsible for verifying the accuracy of the data they receive from contractors.

Military Treatment Facility (MTF) – Shorthand for all uniformed services hospitals and clinics including the several former Public Health Service hospitals that are now called "designated providers" under TRICARE

Nurse Practitioner (NP) - A registered nurse qualified and specially trained to provide primary care, including primary health care in homes and in ambulatory care facilities, long-term care facilities, and other health care institutions. Normally, NPs are licensed and possess masters degrees. Nurse practitioners generally function under the supervision of a physician but not necessarily in his/her or her presence. In some states, NPs are able to provide basic medical services without requiring MD or DO supervision. They are either salaried or reimbursed on a fee-for-service basis. Are sometimes considered "midlevel practitioners".

Outpatient services – Include any health care services that are not provided on the basis of an overnight stay in which room and board costs are incurred.

Overutilization (overuse) – Utilization of medical services, the cost of which exceeds the benefit to patients, or the risks of which outweigh potential benefits.

Patient-focused care – integrates a hospital's operating processes, technology, facilities, organizational structure, and employees – patients and physicians.

Physician assistant (PA) – Work in a dependant relationship with a supervising physician to provide comprehensive medical care to patients. The main services PA's provide are evaluation, monitoring, diagnostics, therapeutics, counseling, and referrals.

Primary Care - The point when the patient first seeks assistance from the medical care system; also the care of the simpler and more common illnesses.

Primary Care Manager (PCM) - a medical professional or a team of providers, in a military facility or in a civilian network, who will assume primary responsibility for providing, arranging and coordinating an enrollee's total health care. A physician designated as a primary care manager could be one who practices in General or Family Practice, Internal Medicine, Pediatrics or OB/GYN. Nurse practitioners and physician's assistants who are privileged to provide primary care services may be organized as part of the primary care manager team

Primary Care Manager By Name (PCMBN) - The Primary Care Manager by Name (PCMBN) program is another effort by TRICARE to ensure beneficiaries receive the best health care possible. The program is designed to assign TRICARE Prime beneficiaries a specific primary care manager (PCM) who will provide primary oversight and continuity of health care and ensure the level of care provided is of the highest quality. The relationship developed between patients and their PCM is the basis for successful prevention-oriented, coordinated health care.

Provider – A doctor, hospital, or other person or place that delivers medical services or supplies.

Referral - The process of sending a patient from one practitioner to another for health care services. Health Plans may require that designated primary care providers authorize a referral for coverage of specialty services.

Region – A geographic area determined by the government for civilian contracting of medical care and other services for TRICARE eligible beneficiaries.

Registered Nurses (R. N.'s) - Registered nurses are responsible for carrying out the physician's instructions. They supervise practical nurses and other auxiliary personnel who perform routine care and treatment of patients. Registered nurses provide nursing care to patients or perform specialized duties in a variety of settings from hospital and clinics to schools and public health departments. A license to practice nursing is required in all states. For licensure as a registered nurse (R.N.), an applicant must have graduated from a school of nursing approved by the state board for nursing and have passed a state board examination.

Routine care – General outpatient visits to a doctor, including laboratory tests and x-rays as well as preventive diagnosis health care.

Sea Change - a profound transformation

Specialty care – Generally defined as the care the Primary Care Manager is not able to provide

Sponsor – The uniformed service person—either active duty, retired, or deceased—whose relationship to the beneficiary makes them eligible to TRICARE
Tiger Team - any official inspection team or special firefighting group called in to look at a problem

Triage - Triage is the act of categorizing patients according to acuity and by determining those that need services first. Most commonly occurs in emergency rooms, but, can occur in any healthcare setting.

TRICARE - A Tri-Service managed care program that provides all health care for DoD beneficiaries within a DoD geographical region. It integrates MTF direct care and CHAMPUS civilian provider resources by forming partnerships with military medical personnel and civilian contractors.

TRICARE Extra – TRICARE Extra is a preferred provider option (PPO). This means you choose a doctor, hospital, or other medical provider within the TriWest provider network to take advantage of lower costs and less paperwork.

TRICARE Prime – With TRICARE Prime, most health care will come from a military treatment facility (MTF), along with the TRICARE contracted Civilian Medical Providers called Preferred Provider Network (PPN). This is similar to a voluntary health maintenance organization (HMO). With TRICARE Prime, active duty members and their dependents have no enrollment fee. Retirees pay an annual fee for a one-year enrollment. Members who sign up for TRICARE Prime will receive a handbook specific to their region.

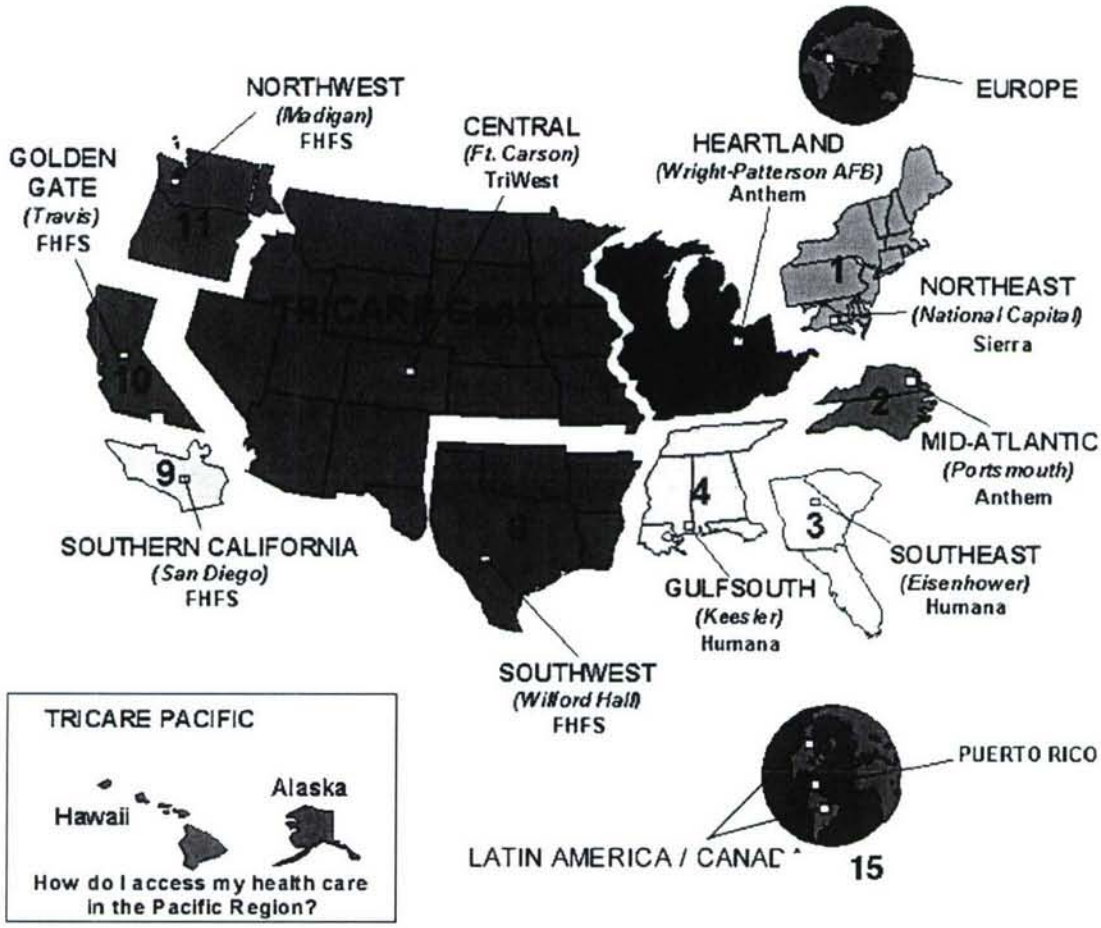
TRICARE Standard – TRICARE Standard is what was formerly known as the Civilian Health and Medical Program of the Uniformed Services or CHAMPUS. TRICARE Standard shares most of the costs of care from civilian hospitals and doctors when care is not obtained at a uniformed services hospital or clinic. TRICARE Standard is a fee-for-service option. With TRICARE Standard, you may seek care from any TRICARE-authorized provider.

TRICARE for Life (TFL) - provides access to expanded medical coverage for uniformed service beneficiaries that have attained the age of 65, are Medicare-eligible, and have purchased Medicare Part B. TRICARE For Life is a permanent healthcare benefit.

Urgent care – Generally defined as a non-emergency illness or injury for which the beneficiary needs medically necessary treatment. But it will not result in disability or death if it is not treated immediately. This kind of illness or injury does require professional attention, and should be treated within 24 hours to avoid further complications. Some examples of such illnesses or injuries include the flu, earache, urinary tract infection, vomiting and diarrhea, sprained ankle, and minor sports injuries.

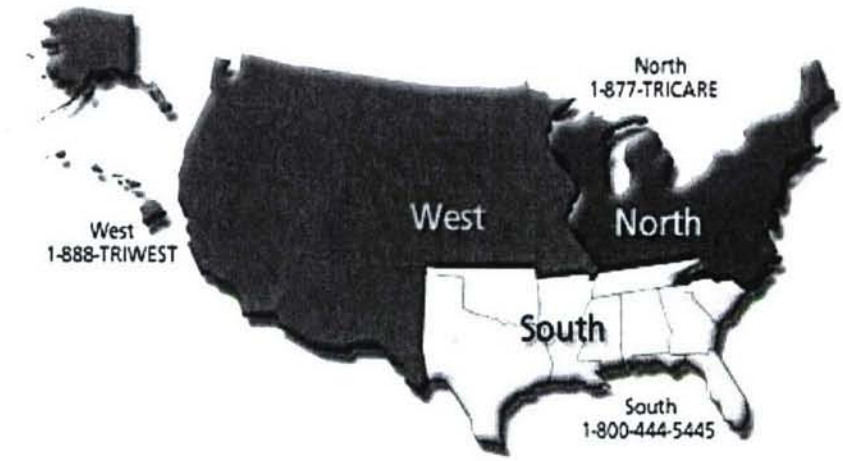
Appendix A

Previous TRICARE Region Map (US & OCONUS)

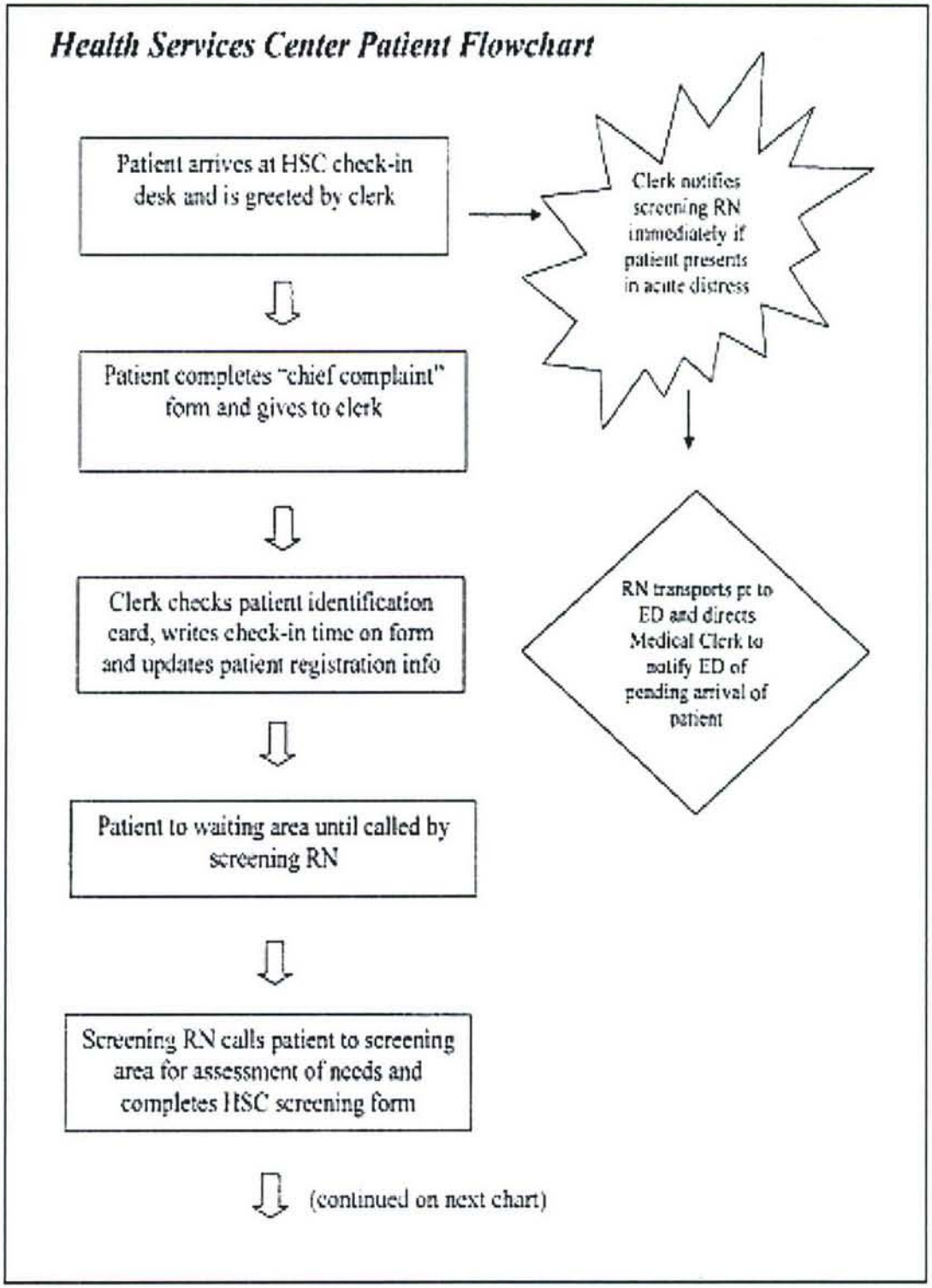


Appendix B

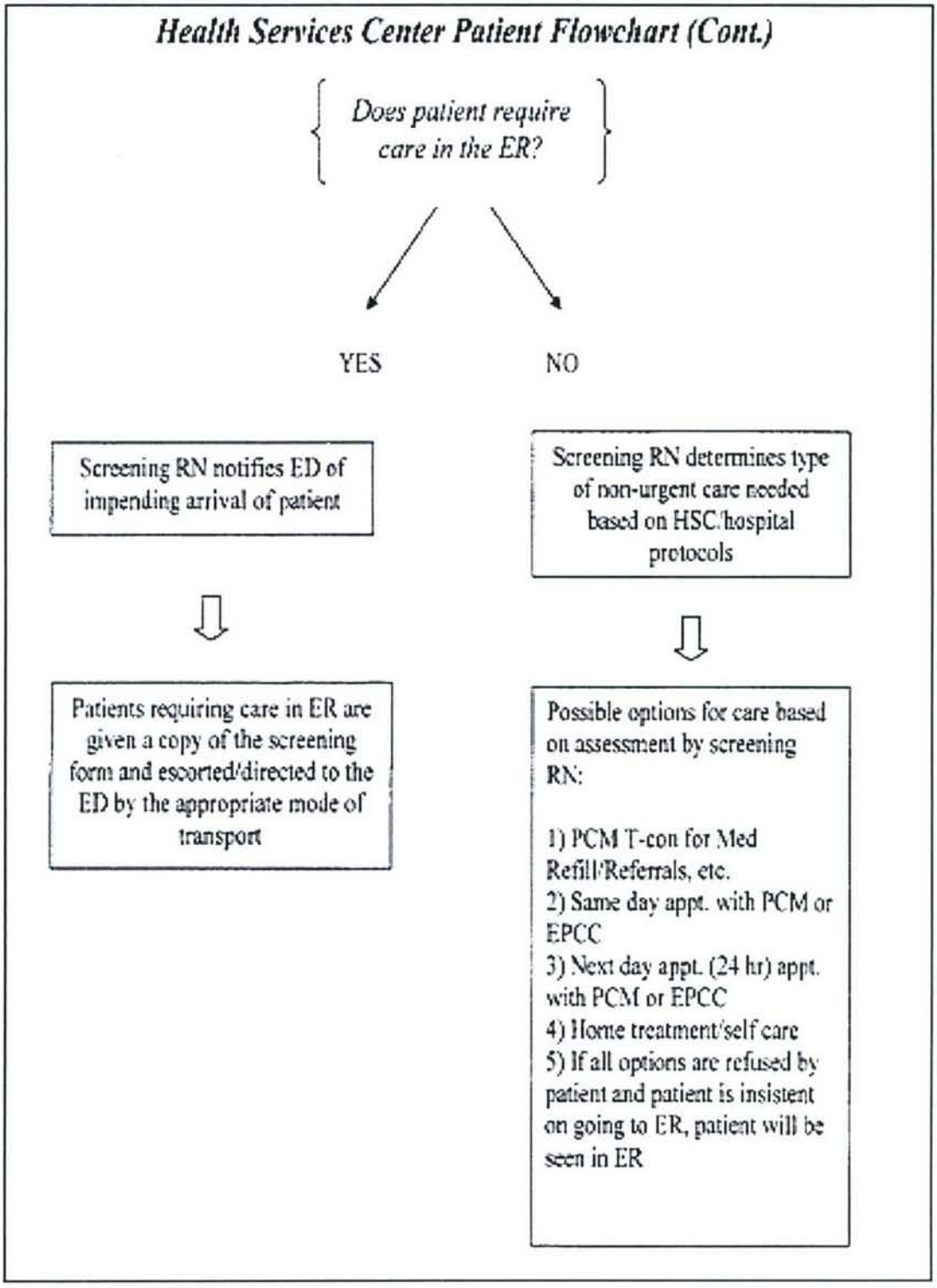
Current TRICARE Region Map (US & OCONUS)



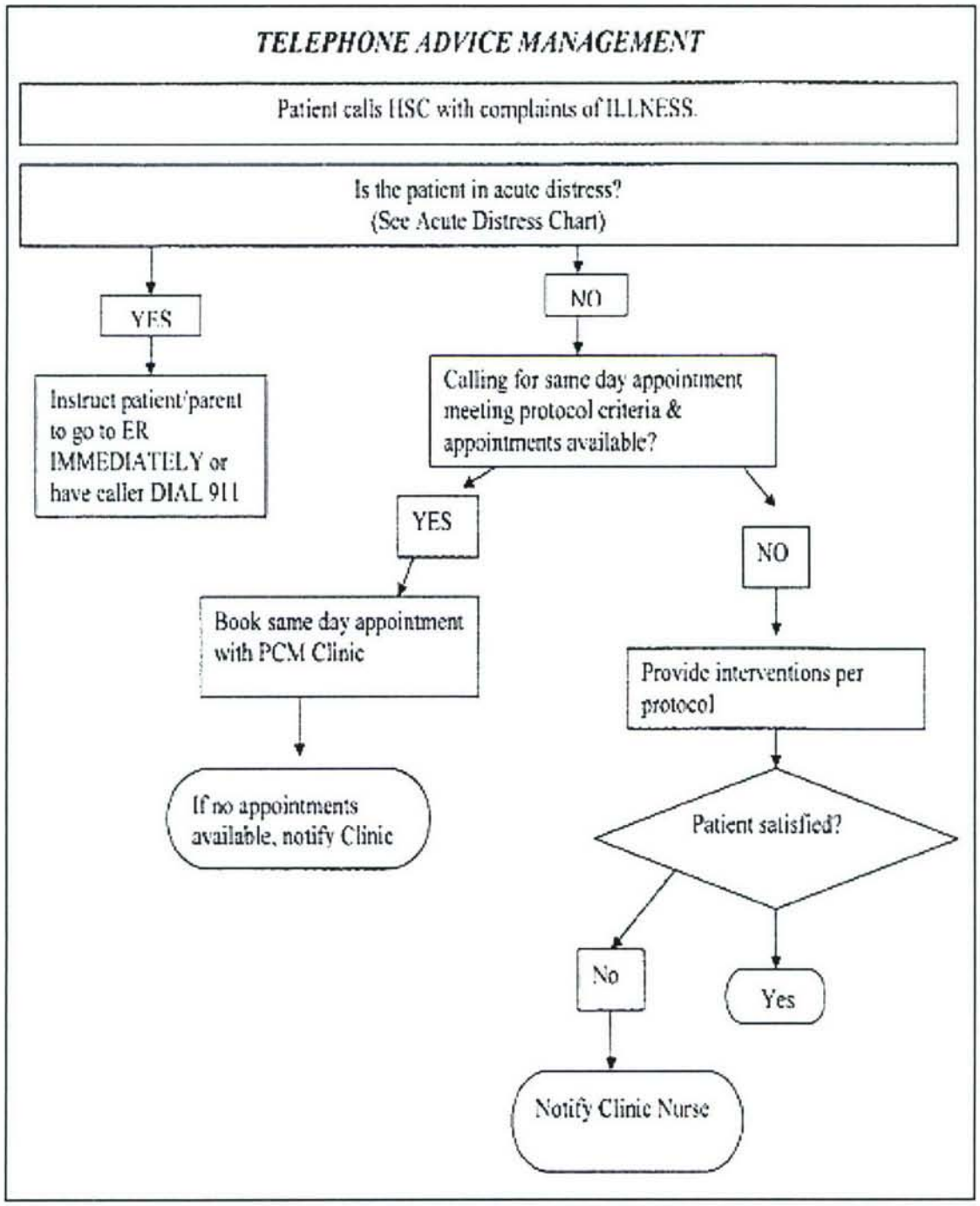
Appendix C


Health Services Center Patient Flowchart
Patient arrives at HSC check-in desk and is greeted by clerk
Clerk notifies screening RN immediately if patient presents in acute distress
Patient completes "chief complaint" form and gives to clerk
Clerk checks patient identification card, writes check-in time on form and updates patient registration info
RN transports pt to ED and directs Medical Clerk to notify ED of pending arrival of patient
Patient to waiting area until called by screening RN
Screening RN calls patient to screening area for assessment of needs and completes HSC screening form
(continued on next chart)

Appendix D


Health Services Center Patient Flowchart (Cont.)
Does patient require care in the ER?
YES
NO
Screening RN notifies ED of impending arrival of patient
Patients requiring care in ER are given a copy of the screening form and escorted/directed to the ED by the appropriate mode of transport
Screening RN determines type of non-urgent care needed based on HSC/hospital protocols
Possible options for care based on assessment by screening RN:
1) PCM T-con for Med Refill/Referrals, etc.
2) Same day appt. with PCM or EPCC
3) Next day appt. (24 hr) appt. with PCM or EPCC
4) Home treatment/self care
5) If all options are refused by patient and patient is insistent on going to ER, patient will be seen in ER

Appendix E


TELEPHONE ADVICE MANAGEMENT
Patient calls HSC with complaints of ILLNESS.
Is the patient in acute distress?
(See Acute Distress Chart)
YES
NO
Instruct patient/parent to go to ER IMMEDIATELY or have caller DIAL 911
Calling for same day appointment meeting protocol criteria & appointments available?
YES
NO
Book same day appointment with PCM Clinic
Provide interventions per protocol
If no appointments available, notify Clinic
Patient satisfied?
No
Yes
Notify Clinic Nurse

Appendix F

Naval Hospital Camp Pendleton
Health Services Center Screening Form

Date:	Check-in time:	Name:	Age:	Sex: M ☐ F ☐
	Time Seen:	Sponsor's SSN (including prefix):		
Chief Complaint:				
Barriers to Communication: No ☐ Yes ☐ Language ☐ Disability ☐ Intervention used for communication: Are you being subjected to abuse: No ☐ Yes ☐		Pain Assessment: Pain Scale Used: (0-10)		
Protocol(s) Used:		Vital Signs Dictated by Protocol: T: P: R: B/P: Sats: WT:		
Screening Information: PCM: Last Primary Care Clinic Visit:		Home Instructions/Comments :		
Allergies: Medication(s)				
1. **Patient Disposition:** Emergency Medicine Department ☐ Appointment ☐ (Date, Time, Place): Home ☐ LWBS ☐ 2. **Mode of Transport from HSC:** Walked ☐ W/C ☐ Crutches ☐ 3. **Safety Measures: Patient accompanied by:** Self ☐ Parent ☐ Guardian ☐ Significant Other ☐ Duty Driver ☐ Other ☐ 4. **Patient Education:** Patient ☐ Parent ☐ Guardian ☐ Significant Other ☐ verbalized understanding of instructions and/or plan		Reason for Disposition to Emergency Medicine Department:		
RN Signature	*Date/Time*	*Provider Signature (if Applicable)*	*Date Time*	
PT Signature	*Date Time*	*Parent/Guardian Signature*	*Date Time*	

Appendix G

Red Flag List for HSC

OB/GYN (<20 weeks to ER >20 weeks to L&D)

1. Vaginal bleeding 2 or more pads in 1 hour or passing clots < 20 weeks to ER
2. Any vaginal bleeding (not spotting) >20 weeks to L&D
3. Abdominal or Pelvic pain

ADULT

1. Acute chest pain (cardiac i.e. does not increase with inspiration or cough)
2. Symptomatic hypotension or hypertension
3. Symptoms of hyperglycemia or hypoglycemia
4. Allergic reaction causing respiratory symptoms or swelling of the tongue(or any resp complaint)
5. Injury or trauma to trunk within 24 hours
6. Severe pain unrelieved by medication
7. Fever with a stiff neck
8. Suicidal/homicidal ideations(0800-1300 to MHU with command escort)
9. Suspected drug overdose or intentional harm to self
10. Shortness of breath/wheezing/02 sat < 94%
11. Mental status changes
12. Any signs of GI bleed
13. Abdominal or pelvic pain with no documented intrauterine pregnancy (if pregnant see OB list)
14. Dehydration/no urine output for 12 hours/15+ points on a tilt/not tolerating PO fluids
15. Severe headache (worst headache of life)
16. Burn to any functional area (hands, feet, face, neck, groin)

PEDIATRICS

1. Respiratory distress-wheezing/02 sat <94%/shortness of breath/circumoral/retractions
2. Dehydration-no urine output for 8 hours/ crying with no tears/ tachycardic/poor skin turgor
3. Head injury
4. Trauma (any injury or burn) within 24 hours
5. Fever with irritability
6. Seizure
7. Purpuric rash
8. Foreign body aspiration
9. Allergic Reaction affecting airway or causing swelling of tongue (or any resp complaint)
10. Temperature above 100.4R in an infant <30 days
11. Fever higher than 103 and looks ill
12. Foreign body removal
13. Significant abdominal pain
14. Lethargic (deficiency in mental and physical alertness and activity)
15. Severe headache

Appendix H

Staff,

As I announced previously, we expanded our primary care service hours at the core Hospital to 0800-2000, seven days a week, starting December 5th. We still have more details and staffing concerns to work out and our new Health Services Center (currently open 0800-2000 Mon-Fri) does not expand hours until January 1st (0700-2300, 7 days a week). However, by all accounts the week, and the first weekend were very successful, with grateful appreciation expressed by many patients and with a lot of hard work and creative solutions from our staff.

Many staff members contributed to this update and expansion of service access for our community. The first weekend of service would have been much more difficult if not for the great work by the regularly scheduled staff and a few additional folks who provided unscheduled coverage to man the spaces. There are many people to thank for their hard work and dedication, but I want to mention a few below who went above and beyond by working unplanned shifts this weekend to serve our patients.

Family Medicine Staff
Dr. Barbara Dodd, CDR Chris Westropp, LCDR Tony Rosales, Mr. Jim Lajoie, LT Chris Boyd

Weekend NOD -- LT Sharon Voll

The staff in our new Health Services Center also had a very successful week. They screened more than 200 patients and found service solutions for each one. Only a few of the patients went to the ER, since alternative solutions were found for most who visited the HSC. The primary and after hours support staff who manned the HSC during its first week included:

Ms. Kelly Mullaney
Ms. Felicia Hicks
Mr. Juan Punzalan
LT Connie Limburg
LTJG Virginia Hinrichs
RN Carol Burgess (evening Advice Nurse coverage)

And finally, our new Health Services Phone Line – 760-725-HELP – started last Wednesday following a lot of hard work by DKM staff and base telephone personnel. The new line has options for:

1. Make or change appointments (6:30 am to 6 pm, Mon-Fri)
2. Speak with a nurse (24/7)
3. Get assistance with specialty care referrals
4. Call-in Pharmacy Prescription Refills
5. Receive customer service assistance

I appreciate the great work by all involved. You have helped make our health services more accessible for the 200,000 beneficiaries we serve. Thank you,

vr// smn

CAPT Steve Nichols, MSC, USN
Commanding Officer

Appendix I

Staff Members,

The answer is, "Yes!" "What's the question?" That is the philosophy we should use when dealing with our enrolled Prime patients. Prime patients enrolled to our command deserve improved access and we should focus our efforts on *meeting their needs* in timeframes that are *convenient for them.*

Access should always be available for our enrolled patients. When there are no appointments readily available, our staff in the Central Appointments Office will be contacting the PCM team. PCMs and team staff will need to work out ways to meet the needs of their patients. Our patients may need an appointment with their team, a T-Con or some phone advice, a simple medication refill, etc. Our efforts to gain improved access for our patients, as well as provider and team education efforts to help patients understand the full range of team support options available to meet their needs, will be key to system stability and improvement.

In addition, our Prime patients should not have to use the Emergency Room unless they have an emergency. Patients who are Category 4 or 5 should always be handled by their PCM Team.

To accomplish this level of access, we need to ensure that:

- Patients know their PCM and their PCM Team.
- PCM Teams know who is enrolled to them.
- Patients know the access and service options available to them.

Beginning Monday, December 5th, we will be making some broad changes to the primary care services and options for our patients to help support the above philosophy.

- **The weekend/holidays Acute Care Clinic and weekday ER Fast Track will close.**
  Staff from those areas will be incorporated into our primary care clinics (FP, Peds, and IM).
- **Primary care clinic hours will be expanded to 0800-2000, 7 days a week.**
- **Health Services Appointment Center hours will expand to 0600-1800, 7 days a week as soon as staffing permits.**
- **Our new Health Services Center will open for business (Mon-Fri, 0800-2000)**
  Hours will be expanded to 0700-2300, 7 days a week, as soon as staffing permits.
  The new HSC will help find solutions for patients who have trouble navigating our systems.
- **Our new health services phone line – 760-725-HELP – will be activated.**
  The new line will provide options to make appointments, speak with a nurse, get assistance with referrals, and provide customer service assistance.

I encourage all staff to help us with this transition to improve access for our patients. Your ideas, suggestions, and constructive criticisms will help refine the systems and processes to better serve our community and to ensure our staff has the tools and resources needed to accomplish this new level of access.

We will continue to seek ways to provide convenient access and to build positive relationships with our patients. Thank you for the continued superb, high quality, and compassionate services you provide every day.

Appendix J

MEDICAL CLERK RESPONSIBILITIES
Naval Hospital Camp Pendleton

1. Stand, Smile, Welcome, and Offer Assistance (Always #1)

- You are generally the first contact patients have when they arrive seeking healthcare.
- Their impression of our hospital (clinic) relies in large part on how they are greeted when they walk in our doors.

2. Complete the ID and DEERS Check-In Process

- Check ID Card and verify full name and FMP and sponsor SSN
- If unable to provide ID, fill out Eligibility For Medical Care Form

3. Verify Primary Care Team Enrollment

4. Always Verify/Update DEERS Information (View/Query DEERS)

- If information is wrong on DEERS, go to the DEERS web site and update their DEERS online.

5. Ensure Current HIPAA and Insurance (2569) forms are in place

6. Exceed Expectations by Anticipating and Meeting the Patient's Needs

- Answer questions or respond to information requests. If you are unsure of the answer, contact your Supervisor for assistance.
- Assist with location of various Departments/Clinics.
- Promptly check patients in for appointments/visits.
- Provide assistance in contacting the PCM/PCM Team.

Appendix K

Press Release

Jan. 26, 2006
For Information Contact:
Naval Hospital Camp Pendleton
Public Affairs Office
(760) 725-1271
Reference #060126-01

FOR IMMEDIATE RELEASE

RIBBON CUTTINGS AT NHCP

CAMP PENDLETON, Calif. - Naval Hospital Camp Pendleton celebrated the completion of recent renovation projects with three ribbon cutting ceremonies Jan. 25, 2006.

A new handicap access ramp was built to provide patients with improved access and safety.

The new Health Services Center, located in the pharmacy waiting area, is a place for patients to go to find solutions to their health service needs. The center is currently open from 8 a.m. to 8 p.m., Monday-Friday. The hours will expand in February to 7 a.m. to 11 p.m., seven day a week.

The relocation of the Medical Boards offices from the ground floor to the first floor next to the Ortho Department was accomplished to provide better access for handicapped patients.

All three projects were done with "ACE" in mind," said Navy Capt. Steven Nichols, the hospital's commanding officer. "Like

aces are the most important cards in a deck of cards, our patients are the most important people to us."

Each letter in the acronym has a meaning, all with improved patient care as a goal, according to Nichols. The 'A' stands for 'convenient Access', the 'C' stands for 'great Customer service' and the 'E' stands for 'an inviting Environment.'

NEW SERVICES AT NAVAL HOSPITAL CAMP PENDLETON

SPECIAL 'fridge-friendly' CUTOUT

NEW HOSPITAL PHONE NUMBERS

Health services phone line - (760) 725-HELP

- Make or change appointments (6:30 a.m. to 6 p.m., Monday-Friday)
- Speak with a nurse (24/7)
- Get assistance with specialty care referrals
- Receive customer service assistance

Primary care clinic hours - 8 a.m. to 8 p.m., 7 days a week

- Expanded hours for TRICARE Prime patients, more convenient access to your PCM

Pharmacy Ticket Kiosk

- Easier access for all pharmacy service patrons

Health Services Center (HSC) - 8 a.m. to 8 p.m., Monday-Friday

- In the Pharmacy Waiting Area, helping find solutions for your health service needs
- Assistance in arranging appropriate access to care
- Providing advice or patient education
- Helping you contact your provider who can prescribe or refill medication
- Referring you to the Emergency Room, when medically indicated
- In January 2006, hours will be expanded to 7 a.m. to 11 p.m., 7 days a week

Appendix M

NEW SERVICES AND OPTIONS FOR YOU AND YOUR FAMILY
At Naval Hospital Camp Pendleton

Naval Hospital Camp Pendleton is focused on establishing and maintaining your health through improved access to your primary care manager (PCM) team. We hope you will contact your PCM team for all your healthcare needs. When you are enrolled in TRICARE Prime, your PCM team is responsible for guiding all of your medical care, including referring you to a specialist when warranted. It makes sense for you to have a close relationship with your PCM team so you can get the kind of personalized care you deserve.

To assist you and your PCM team, we have established a new telephone access line (760-725-HELP), a new Health Services Center, and a new Central Appointments Office at your Naval Hospital.

We offer a variety of options to serve you and to meet the needs of you and your family. You can:

- **VISIT THE CAMP PENDLETON JOINT RECEPTION CENTER (Bldg. 130132) OR THE TRICARE SERVICE CENTER AT THE HOSPITAL (Bldg H-100, 6th Floor)** (Ph: 888-TRIWEST) -- Mon-Fri, 7:00 AM to 5:00 PM. The staff can assist with new enrollments, Primary Care Manager Change Requests, TRICARE benefits questions and claims issues. We will also review your health history and enter key information in our computerized medical record system so your PCM team has this information available whenever you visit them. (NOTE: You should also bring immunization records for any children under 6 years old when you come to the TSC.)

- **CALL YOUR PCM CLINIC** -- During regular business hours, you can call your PCM clinic. They will provide personalized advice and services, and should be your first stop for questions, complex issues, or booking specialized visits. Your team nurse may be able to solve some of your issues over the phone without scheduling a provider appointment.

- **MAKE AN APPOINTMENT >> (760) 725-HELP** -- When your problem cannot be solved by phone, you can make a regular appointment with your personal PCM team for routine, chronic, or preventive appointments to ensure continuity in care. For acute problems, we will provide quick access to one of your PCM team providers.

- **USE YOUR "HEALTHWISE HANDBOOK," "TAKE CARE OF YOURSELF/YOUR CHILD," OR WEBMD** (through TRICARE Online) -- These are all great resources for you and your families healthcare needs.

- **CALL OR VISIT OUR HEALTH SERVICES CENTER (HSC)** (Ph: 760-725-HELP) -- Our new HSC is open from 8:00 AM until 8:00 PM, Monday through Friday, and is located just inside the Naval Hospital (next to the Pharmacy) – and *no appointment is necessary*. Specially trained nurses will screen patients on a walk-in basis to identify the best and quickest way to deal with your medical issues. The HSC is also a great one-stop source for information and assistance. The HSC staff can assist you and provide options for receiving the healthcare services and support you need and deserve. The HSC can:
  - Assist you in arranging appropriate access to care.
  - Provide advice or patient education.
  - Assist you in communicating with your provider who can prescribe or refill medication.
  - Refer you to the Emergency Department, when medically indicated.

- **USE THE "TRICARE ONLINE" WEBSITE** (www.tricareonline.com). You can book appointments with your PCM through that site, as well as look up medical information using ***WebMD***.

- **FOR EMERGENCIES** (life-, limb-, or eyesight-threatening illnesses or trauma) -- Our Emergency Room is open 24 hours a day, every day. For less urgent problems, please use your PCM Clinic or the Health Services Center, since less urgent problems generally face long waits for care in the Emergency Room.

Appendix N

	Total ED visits			
	Year			
	2003	2004	2005	2006
1	92	158	70	96
2	95	124	105	92
3	71	153	69	61
4	76	143	68	58
5	95	164	81	89
6	96	151	95	96
7	85	163	54	86
8	90	136	72	80
9	100	116	85	79
10	76	181	83	85
11	80	171	76	70
12	109	201	88	70
13	101	175	74	70
14	92	145	50	68
15	97	139	70	65
16	81	103	92	71
17	61	123	70	72
18	60	125	76	59
19	77	97	79	76
20	75	67	67	63
21	31	50	48	40
22	76	105	63	60
23	88	85	85	61
24	64	102	84	64
25	76	87	85	55
26	89	109	95	47
27	83	75	72	47
28	73	52	49	50
29	88	109	69	72
30	79	69	99	62
31	86	64	90	57
32	64	88	85	67

33	110	78	99	83
34	97	121	87	68
35	104	92	66	62
36	87	96	75	54
37	103	76	106	59
38	66	76	74	60
39	79	99	94	54
40	93	93	68	65
41	100	93	88	74
42	101	90	54	58
43	86	88	61	79
44	72	66	83	69
45	77	75	109	59
46	81	77	99	61
47	74	102	101	58
48	111	98	91	57
49	113	98	84	83
50	91	109	55	57
51	84	84	109	54
52	77	76	115	76
53	64	108	105	75
54	119	104	105	70
55	93	96	91	73
56	72	110	81	72
57	86	92	82	70
58	108	91	95	65
59	68	78	86	60
60	83	113	90	59
61	119	108	110	73
62	109	110	88	100
63	92	100	82	83
64	91	97	68	67
65	87	77	118	59
66	88	85	99	73
67	77	128	130	74
68	106	121	107	88
69	87	124	96	111
70	78	118	72	102
71	85	110	71	74

72	82	85	98	66
73	105	98	102	81
74	82	122	105	57
75	92	143	111	70
76	123	125	96	71
77	103	96	82	79
78	95	112	73	80
79	101	100	84	75
80	76	108	107	81
81	68	123	102	68
82	82	94	99	55
83	75	99	95	78
84	82	93	84	88
85	77	90	102	67
86	50	84	107	64
87	61	104	94	62
88	68	76	118	60
89	79	96	113	56
90	79	71	80	57
91	79	91	69	61
92	77	74	59	69
93	71	78	118	65
94	50	103	108	78
95	72	111	101	62
96	67	94	129	64
97	73	117	113	53
98	77	102	80	51
99	76	88	71	64
100	70	67	132	60
101	54	99	103	61
102	44	91	110	68
103	86	104	108	55
104	73	88	101	52
105	58	96	97	76
106	33	52	70	61
107	70	77	118	67
108	51	89	114	68
109	67	97	98	71
110	88	103	126	74

111	61	108	90	69
112	61	91	66	65
113	67	63	62	78
114	63	55	112	62
115	50	107	117	60
116	55	95	121	60
117	72	73	116	69

Data retrieved from CHCS on April, 2006. It includes the dates of December 5 through March 31, for the years 2003 through 2006.

Appendix O

	Total Prime patient, non-urgent, working hours, ED visits			
	Year			
	2003	2004	2005	2006
1	17	41	-	8
2	23	-	34	24
3	-	-	23	16
4	-	41	7	14
5	25	36	17	26
6	24	42	22	-
7	15	38	-	-
8	23	35	-	14
9	28	-	27	15
10	-	-	23	21
11	-	47	21	12
12	37	43	26	10
13	26	45	22	-
14	14	36	-	-
15	27	31	-	9
16	17	-	21	19
17	-	-	30	16
18	-	26	23	15
19	28	26	30	18
20	20	18	25	-
21	3	14	-	-
22	25	35	-	7
23	24	-	31	10
24	-	-	37	15
25	-	19	27	12
26	15	25	32	17
27	17	16	25	-
28	17	14	-	-
29	25	28	-	15
30	19	-	34	13

31	-	-	30	10
32	-	21	22	9
33	24	17	31	17
34	28	33	14	-
35	20	21	-	-
36	24	12	-	14
37	15	-	38	15
38	-	-	28	8
39	-	15	28	12
40	23	24	27	15
41	18	18	30	-
42	32	11	-	-
43	13	23	-	19
44	18	-	12	19
45	-	-	30	16
46	-	11	21	14
47	19	30	36	14
48	29	20	29	-
49	24	18	-	-
50	20	19	-	15
51	24	-	31	9
52	-	-	37	10
53	-	28	35	18
54	34	22	30	17
55	29	26	29	-
56	17	25	-	-
57	21	29	-	9
58	31	-	26	11
59	-	-	20	10
60	-	35	24	11
61	23	19	40	13
62	29	24	16	-
63	20	24	-	-
64	16	20	-	16
65	24	-	33	13
66	-	-	33	19
67	-	29	38	23
68	25	30	33	26
69	18	27	34	-

70	22	39	-	-
71	18	21	-	12
72	17	-	32	18
73	-	-	35	22
74	-	34	37	14
75	26	38	30	18
76	21	28	31	-
77	24	13	-	-
78	25	32	-	28
79	20	-	26	15
80	-	-	28	27
81	-	29	22	12
82	24	19	32	13
83	18	22	25	-
84	18	24	-	-
85	19	15	-	11
86	13	-	24	21
87	-	22	16	17
88	-	13	38	20
89	20	26	26	5
90	21	13	29	-
91	18	18	-	-
92	13	-	-	12
93	15	-	34	22
94	-	27	27	8
95	-	22	24	14
96	17	28	38	18
97	21	31	38	-
98	18	24	-	-
99	14	-	-	15
100	19	-	43	12
101	-	24	42	11
102	-	19	28	24
103	19	27	27	11
104	15	18	23	-
105	11	27	-	-
106	12	-	-	17
107	14	-	43	18
108	-	15	40	11

109	-	23	28	21
110	17	27	28	17
111	10	23	30	-
112	8	21	-	-
113	7	-	-	14
114	17	-	22	13
115	-	27	31	13
116	-	16	35	16
117	11	16	39	17

Data retrieved from CHCS on April, 2006. It includes the dates of December 5 through March 31, for the years 2003 through 2006. *Note.* Weekends are not considered as during working hours. – was placed in space to denote weekend.

References

American College of Emergency Physicians, Crowding Resources Task Force (2002). *Responding to emergency department crowding: A guidebook for chapters.* Dallas, TX: American College of Emergency Physicians.

Andersen R. & Aday L. (1978). Access to medical care in the U.S.: Realized and potential. *Medical Care*. 16, 533-46.

Anderson, G., & Horvath, J. (2004). The growing burden of chronic diseases in America. *Public health reports*, *119*, 263-270.

Arendt, K. W., Sadosty, A. D., Weaver, A. L., Brent, C. R., & Boie, E. T. (2003). The left without being seen patients: What would keep them from leaving? *Annals of Emergency Medicine,* 42: 317-323.

Baker, D. W., Stevens, C. D., & Brook R. H. (1991). Patients who leave a public hospital emergency department without being seen by a physician: Causes and consequences. *Journal of the American Medical Association*, *266*(8), 1085-1090.

Bodenheimer, T., Wagner, E., & Grumbach K. (2002). Improving primary care for patients with chronic illness: The chronic care model. *JAMA*, *228* (15), 1909-1914.

Chan, B. T., & Ovens, H. J. (2002). Frequent users of emergency departments. *Canadian Family Physician*, *48*, 1654-1660.

Chapman, S. (1995). Sizing up TRICARE. *Air Force Magazine*. Vol. 78, No. 8

Committee on Pediatric Emergency Medicine (2004). Overcrowding crisis in our nation's emergency department: Is our safety net unraveling? *Pediatrics*, *114*(3), 878-888.

Donabedian, A. (1980). *The definition of quality and approaches to its assessment*. Ann Arbor, MI: Health Administration Press, Vol 1.

Dranove, D. (2002). The economic evolution of American health care: From Marcus Welby to managed care. *Princeton University Press.*

English, J. (2000). The four 'p's of marketing are dead. *Marketing health services*, 20 (2), 21-23.

Family Practice Working Party, Organization of Academic Family Medicine (2003). *Future of family Medicine. Future of family medicine task force.*

Fuchs, V. (1974). *Who shall live? health, economics, and social choice*. 2nd ed. New York: Basic Books, Inc.

Gill, J. M., Mainous, A. G., & Nsereko, M. (2004). The effect of continuity of care on emergency department use. *Arch Fam Med* 2000: 9: 333-8.

Ginter, P., Swayne, L., & Duncan, W. (2002). *Strategic management of health care organizations*. 4th ed. Malden, MA: Blackwell publishing.

Gordon, J. A., Billings J., Asplin B. R., and Rhodes, K. V. (2001). Safety net research in emergency medicine: Proceedings of the academic emergency medicine consensus conference on "the unraveling safety net." *Acad Emerg Med*, (8), 1024-1029.

Hansen, G. (2005). The drug-seeking patient in the emergency room. *Emerg Med Clin North Am,* 23(2): 349-65.

Institute of Medicine (1993). *Access to health care in America*. 1st ed. Washington, DC: National Academy Press.

Institute of Medicine (1994). *Defining primary care: An interim report.* Washington, DC: Institute of Medicine.

Institute of Medicine (2001). *Crossing the quality chasm: A new health system for the 21st century.* Washington, DC: National Academy Press

Kucinich D., J. Military treatment facilities. *GAO report* (4).

Lacy, N. L., Paulman A., Reuter M. D., & Lovejoy, B. (2004). Why we don't come: Patient perceptions on no-shows. *Annals of Family Medicine, 2*(6), 541-545.

Lawrence, D. (2003). *From chaos to care: the promise of team-based medicine.* 1st ed. cambridge, MA: Da Capo Press.

Lewin Group (2002). Emergency department overload: A growing crisis. *The results of the American Hospital Association Survey of Emergency Department and Hospital Capacity.* Falls Church, VA: American Hospital Association.

Lowe, R. A. (2005). How primary care practice affects Medicaid patient's use of emergency services. *Leonard Davis Institute of Health Economics, 10*(8), 1-4.

Lucas, R. H., & Sanford, S. M. (1998). *An analysis of frequent users of emergency care at an urban university hospital.* Annals of Emergency Medicine, 32, 563-568.

McCaig, L. F., & Burt, C. W. (2005). National hospital ambulatory medical care survey: 2003 emergency department summary. *Centers for Disease Control and Prevention, National Center for Health Statistics,* Advance Data, Number 358.

Nold, J. M. (2006). *U.S. Army emergency medicine: An analysis of closed malpractice claims.* Unpublished master's thesis, Baylor University, Texas.

Penchansky, R. & Thomas, J.W. (1981). The concept of access: Definition and relationship to consumer satisfaction. *Medical Care.* 19: 127-40.

Phillips, R. L., & Starfield, B. (2003). Why does a U.S. primary care physician workforce crisis matter? *Am Fam Physician.* 68:1494-1496.

Piorkowski, J., Gibbs, R., & Hirsh, H. (1991). *Malpractice liability, risk management, for the American college of legal medicine.* 2nd ed. St. Louis, MO: Mosby-Year Book, Inc..

Richardson, L., Hwang, U. (2001). Access to care: A review of the emergency medicine literature. *Academy of Emergency Medicine. 8*, 1030-1036.

Robbins, S. (2003). *Organizational behavior.* 10th ed. Upper Saddle River, NJ: Prentice Hall.

Rosenblum, M. (2003). *The decline of American medicine: Where have all the doctors gone?* 1st ed. Lincoln, NE: Universe, Inc..

Safran, D., G. (2003). Defining primary care: What can we learn from patients? *Ann Intern Med*; 138 (3): 248-255.

Sarver, J. H., Cydulka, R. K., & Baker D. W. (2002). Usual source of care and nonurgent emergency department use. *Academy Emergency Medicine*, 9(9), 916-923.

Shi, L., & Singh, D. (2004). *Delivering health care in America: A systems approach.* 3rd ed. Sudbury, MA: Jones and Bartlett Publishers.

Wolff, J., Starfield, B., & Anderson G. (2002). Prevalence, expenditures, and complications of multiple chronic conditions in the elderly. *Archives of Internal Medicine*, *162*(20), 2269-2276.

Xu, K., T. (2002). *Usual source of care in preventive service use: A regular doctor versus a regular site.* Health Services Research 37 (6): 1469-86.

Young, G. P., Wagner, M. B., Kellermann, A. L., Ellis, J., & Bouley, D. (1996). *Ambulatory visits to hospital emergency departments. Patterns and reasons for use.* 24 Hours in the ED Study Group. JAMA. 276:460-5.