

Running head: REASONS FOR ER UTILIZATION BY NON-URGENT PATIENTS

Reasons for Utilization of the Emergency Room at Irwin Army Community Hospital

by Patients Classified as Non-urgent

CPT Jeffrey S. Hillard

U.S. Army-Baylor University

Graduate Program in Healthcare Administration

## Report Documentation Page

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE  
**AUG 1998**

2. REPORT TYPE  
**Final**

3. DATES COVERED  
**Jul 1998 - Jul 1999**

4. TITLE AND SUBTITLE

**Reasons for Utilization of the Emergency Room at Irwin Army Community Hospital by Patients Classified as Non-urgent**

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

**CPT Jeffery S. Hillard, USA**

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

**Irwin Army Community Hospital 600 Caisson Hill Road Fort Riley, Kansas 66442-5037**

8. PERFORMING ORGANIZATION REPORT NUMBER

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

**US Army Medical Department Center and School Bldg 2841 MCCS-HRA (US Army-Baylor Program in HCA) 3151 Scott Road, Suite 1412 Fort Sam Houston, TX 78234-6135**

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)  
**23-99**

12. DISTRIBUTION/AVAILABILITY STATEMENT

**Approved for public release, distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The primary objective for conducting this study was to identify the reasons patients categorized as having non-urgent conditions utilized the emergency room (ER) at Irwin Army Community Hospital, Fort Riley, Kansas, a 44-bed facility that serves a user population of approximately 30,000 people. The research method for this study was a descriptive, cross-sectional design and utilized a questionnaire to obtain patient responses. Patients who presented to the ER between 16 February 1999 and 14 March 1999, and who were assessed as having a non-urgent medical condition were eligible to participate in this study. A total of 2,333 patients (93.0% of all patients) who presented to the ER were eligible for study. Of the 380 questionnaires that were distributed, 296 patients (12.7% of the total number of patients who presented) returned completed questionnaires. Of that total, 142 patients(48.0%) utilized the ER because they believed they had an emergent or urgent medical condition that required attention within two to four hours and 16 patients (5.4%) stated that they were too sick to go anywhere else. One hundred nine patients (36.8%) indicated that their use of the ER related to issues regarding access to primary care sources, which included 54 patients (49.5% of access reasons) who reported that their primary care clinics were not operational during convenient times and 36 patients (33.0% of access reasons) who utilized the ER because no primary care appointments were available when they tried to schedule them. Sixty-three (21.3%) respondents stated that they were referred to the ER by a health care provider or telephone advice nurse. A total of 41 patients (13.9%) cited dissatisfaction with their current sources of primary care and/or had opinions that the ER staff provided better care than that given by their respective primary care managers. Perceptions of emergencies, difficulties in accessing primary care, and dissatisfaction toward primary care providers were all reasons patients with non-urgent conditions stated to justify their use of the emergency room. Strategies that address patient education, increase and expand access to primary care sources, and make primary care sources attractive to patients should be considered and studied by the staff of Irwin Army Community Hospital.

15. SUBJECT TERMS

**Reasons for ER Utilization by Non-urgent Patients**

16. SECURITY CLASSIFICATION OF:

a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>
----------------------------------	------------------------------------	-------------------------------------

17. LIMITATION OF ABSTRACT

**UU**

18. NUMBER OF PAGES

**46**

19a. NAME OF RESPONSIBLE PERSON

### Acknowledgements

Many individuals contributed to the completion of this graduate management project. Lieutenant Colonel Scott Hendrickson provided outstanding guidance and support while serving as preceptor for this investigator. Major Marc Daymude, Major Paula Fratzke, Captain Vincent Leto, and the staff of the emergency room at Irwin Army Community Hospital willingly accepted the additional responsibilities involved in assisting with the data collection for this study and are all greatly appreciated. Ms. Phyllis Whiteside's tireless efforts in locating and obtaining numerous sources of applicable literature helped to set the foundation for this study. Mrs. Lori Russell gladly provided the time and patience to serve as proofreader and quality control monitor. Finally, Dr. A. David Mangelsdorff's coaching and advice allowed for flexibility and freethinking on the part of this investigator in the development and completion of this research.

### Abstract

The primary objective for conducting this study was to identify the reasons patients categorized as having non-urgent conditions utilized the emergency room (ER) at Irwin Army Community Hospital, Fort Riley, Kansas, a 44-bed facility that serves a user population of approximately 30,000 people. The research method for this study was a descriptive, cross-sectional design and utilized a questionnaire to obtain patient responses. Patients who presented to the ER between 16 February 1999 and 14 March 1999, and who were assessed as having a non-urgent medical condition were eligible to participate in this study.

A total of 2,333 patients (93.0% of all patients) who presented to the ER were eligible for study. Of the 380 questionnaires that were distributed, 296 patients (12.7% of the total number of patients who presented) returned completed questionnaires. Of that total, 142 patients (48.0%) utilized the ER because they believed they had an emergent or urgent medical condition that required attention within two to four hours and 16 patients (5.4%) stated that they were too sick to go anywhere else. One hundred nine patients (36.8%) indicated that their use of the ER related to issues regarding access to primary care sources, which included 54 patients (49.5% of access reasons) who reported that their primary care clinics were not operational during convenient times and 36 patients (33.0% of access reasons) who utilized the ER because no primary care appointments were available when they tried to schedule them. Sixty-three (21.3%) respondents stated that they were referred to the ER by a health care provider or telephone advice nurse. A total of 41 patients (13.9%) cited dissatisfaction with their current sources of primary care and/or had opinions that the ER staff provided better care than that given by their respective primary care managers.

Perceptions of emergencies, difficulties in accessing primary care, and dissatisfaction

toward primary care providers were all reasons patients with non-urgent conditions stated to justify their use of the emergency room. Strategies that address patient education, increase and expand access to primary care sources, and make primary care sources attractive to patients should be considered and studied by the staff of Irwin Army Community Hospital.

Table of Contents

Introduction..... 7

    Conditions Which Prompted the Study..... 7

    Statement of the Problem..... 9

    Literature Review..... 9

    Purpose..... 14

Method and Procedures..... 14

Results..... 17

    Response Rate..... 17

    Respondent Demographics and Insurance Status Data..... 17

    Location of Regular Medical Care..... 18

    Frequency of Emergency Room Utilization..... 18

    Reasons for Visiting the Emergency Room..... 19

Discussion..... 20

Conclusions and Recommendations..... 30

Tables ..... 32

Figures..... 37

Appendix..... 39

References..... 44

List of Tables and Figures

Table 1. Demographic Information and Insurance Status of Study Patients..... 32

Table 2. Location of Regular Source of Medical Care..... 33

Table 3. Frequency of Emergency Room Visits in the Past 12 Months by Age,  
Insurance Status, and Beneficiary Status of Study Patients..... 34

Table 4. Reasons for Non-urgent Patient Visits to the Emergency Room, Irwin  
Army Community Hospital, by Insurance Status..... 35

Table 5. Reasons for Non-urgent Patient Visits to the Emergency Room, Irwin  
Army Community Hospital, by Beneficiary Category..... 36

Figure 1. Total Visits to Emergency Room, Irwin Army Community Hospital,  
Between 16 February and 14 March 1999 by Time Periods..... 37

Figure 2. Daily Visits to Emergency Room, Irwin Army Community Hospital,  
Between 16 February and 14 March 1999 by Total Number of Patients,  
By Number of Total Patients Who Were Non-urgent, and by Number  
Of Total Patients Enrolled in TRICARE Prime..... 38

Reasons for Utilization of the Emergency Room at Irwin Army Community Hospital  
by Patients Classified as Non-urgent

Introduction

Conditions Which Prompted the Study

The “inappropriate” use of the hospital emergency room (ER) by patients with non-urgent conditions often receives much of the blame for the rising cost of health care in the United States. The use of emergency departments for primary care has become so routine that some patients name their ER physician when asked about their primary caregiver (McNamara, Witte, & Koning, 1993). Consequently, the majority of managed care organizations, especially health maintenance organizations (HMO), have developed and implemented strategies to discourage their enrollees from inappropriately using the ER, such as requiring patients to obtain pre-authorization. However, these strategies must be carefully implemented because patients who present with complaints that begin as non-urgent could develop more serious health problems if their conditions are not attended to.

The challenge for health care decision makers is to provide services in which patients can receive quality health care in the most appropriate setting, accessing the most appropriate resources, in a timely manner. Before striving to meet this challenge, though, the reasons that patients present as a justification to access health care must be understood so that hospitals can structure their services to meet the patients’ needs.

There were several conditions that prompted this study. First, the emergency room at Irwin Army Community Hospital (IACH), Fort Riley, Kansas, received between 70 to 110 patient visits per day. This was a high number for an understaffed ER. Waiting times for non-urgent patients often exceeded four to six hours, as the staff had to care for patients whose conditions

warranted more immediate attention. Long waits often resulted in dissatisfied patients, as well as frequent incidents in which some patients left the ER without being seen by a doctor.

Second, 50% of the daily ER visits to IACH were by patients enrolled in TRICARE Prime, the military's health program that functions similar to a health maintenance organization. The high number of visits to the ER by Prime patients was disturbing because those enrolled to a primary care manager (PCM) at IACH are supposed to receive the highest priority of access to hospital services at no cost. Additionally, the IACH emergency room received up to ten visits per day by active duty soldiers. While many of these visits were urgent or emergent in nature, several were not. In fact, some active duty soldiers with non-urgent conditions visited the ER during hours that their primary care clinic was operational.

Third, patients not enrolled in TRICARE Prime occupied almost half of the daily appointments in the hospital's primary care clinics. As a result, patients enrolled in TRICARE Prime to the hospital's primary care clinics often could not obtain an appointment because the schedules were completely filled. In these instances, patients had to choose to either attempt to make another appointment the following business day or to seek care in the ER. This choice was terribly unfair to Prime beneficiaries because they enrolled to obtain several benefits, one of which was to obtain timely, guaranteed access to their respective primary care provider.

Finally, the hours of operation for the hospital's primary care clinics were 8:00 a.m. to 4:00 p.m. Consequently, the majority of ER visits occurred during the hours when the clinics were closed. Irwin Army Community Hospital began offering after-hours primary care on March 1, 1999, but it is available for only three hours per day, two days per week. Patients requiring care at other times must wait until the next business day to schedule an appointment with their respective primary care physician or they may choose to use the ER.

### Statement of the Problem

Patients with non-urgent conditions made up 50% to 79% of the total daily visits to the emergency room at Irwin Army Community Hospital.

### Literature Review

More than half of the 90.5 million annual emergency room (ER) visits in the United States are for minor problems, or in other words, for non-urgent care. Studies show that caring for non-urgent patients costs two to three times more if provided in the ER than if provided in other settings, such as a primary care clinic, also known as a family practice clinic or ambulatory care clinic (Winslow, 1996). The fixed costs of operating an emergency department (supplies, equipment, and basic staffing needs) are high (Gill, 1994). There are also hidden costs to the patients associated with emergency department visits, such as the room charge, testing, therapy, a professional component, and take-home items or medication. These expenses come from losing control of the patient's care (Kongstvedt, 1996). Another cost issue arises upon examining the high level of uncompensated care hospitals incur due to providing emergency care. The dollars charged to the patients who obtain care in the ER are two times the actual cost of care because half of all emergency department charges go uncollected (Williams, 1996). Hospitals cannot be selective in terms of which patients they will see in their emergency departments. Under the Emergency Medical Treatment and Labor Act of 1986, every patient who presents to an emergency department must be examined and, if he or she is found to have a medical emergency, must be stabilized before being discharged or transferred (Henry, 1996).

Some researchers contend that the cost of utilizing emergency department resources to treat non-urgent patients is not a significant area of concern. A research group in one particular study concluded that the true costs of non-urgent care in the emergency department are relatively low

(Williams, 1996). Using data compiled over a two-year period from a convenience sample of six community hospitals in Michigan, the group found that the potential savings from diverting non-urgent patients to primary care physicians' offices may be much less than is widely believed. The marginal cost (defined as the extra cost for one additional visit) was only \$24. This cost is less than many of the co-payments some managed care organizations charge to their customers for ER use.

Researchers have also examined the question of appropriateness of non-urgent care in the emergency room. The definition of appropriateness varies among health care providers, third-party payers, and patients. Providers and payers relate appropriateness to the acuity or urgency of the medical problem while patients place little emphasis on the actual urgency of their perceived condition. Overall, measuring urgency is a complicated task. The assessment of urgency should be based on the patient's presenting signs and symptoms rather than on the final diagnosis (Gill, 1994).

Differences in the definition of appropriateness of emergency department visits also exist among provider groups as well. A study was conducted to determine the levels of agreement between three methods of assessing appropriateness. Upon researching the agreement between internists and emergency physicians, the results showed only moderate agreement between the two groups. Emergency physicians were over 10 times more likely than internists to classify non-urgent patients as appropriate for ER care (O'Brien, Shapiro, Fagan, et al., 1997). Reasons for these results revolve around issues such as role perception, environmental efficiencies, continuity of care, safety of limiting access, and financial incentives.

Attempts by hospitals to self-regulate appropriate visits to their emergency departments have generated mixed opinions in the medical community. To redirect some of the 35,000

annual visits to its emergency department, the Regional Medical Center in Memphis, Tennessee implemented a “triage out” policy with the purpose of redirecting patients to appropriate levels of care. This approach has been successful in reducing ER visits, and many patients triaged out have been satisfied with their alternate care. However, critics fear many patients who are triaged out will not seek further care, and that their non-urgent condition could deteriorate. The president of the American College of Emergency Physicians cited this practice as being “selective abandonment”; the policy is questionable ethically and medically and adds more inefficiencies to an already inefficient system (Thompson, 1996).

Recommendations for strategies to reduce inappropriate ER visits, in addition to the previously described strategy, are abundant throughout the literature. Some managed care organizations require patients to obtain authorization prior to using the emergency room. Patients may also be required to incur a co-payment for ER use. Studies have found the co-payment requirement to be an effective control, especially with instances involving patients with the least serious problems. However, recent legislation, such as the Patient Bill of Rights, has been implemented or proposed to protect patients’ access to emergency care, regardless of the patients’ abilities to pay (American College of Emergency Physicians, 1998).

Improving access to primary care resources is the most common approach. Although there is disagreement on the cost of emergency room care and with the question of the appropriateness of treating non-urgent patients in the ER, there is a general consensus that the most important concern when patients utilize the ER for non-urgent complaints is the lack of continuity of care. Emergency physicians have no records of what medications patients are already taking or of tests that have already been performed (Henry, 1996). Primary care physicians are better suited to managing the overall care of non-urgent patients. In a study published in a recent issue of

Medical Care, researchers suggested that maintaining a relationship with a regular physician might reduce non-urgent use of the ER regardless of insurance status or health status (Petersen, Burstin, O'Neil, Orav, & Brennan, 1998).

Several suggestions have been made to improve patient access to primary care resources. Offering after-hours clinics is one effective method. The average doctor's office is closed three-quarters of the week, leaving little choice for many patients but to go to the ER (Henry, 1996). This strategy is even endorsed by the government. The Assistant Secretary of Defense for Health Affairs signed a policy that tasks all military medical treatment facilities to evaluate the feasibility of providing after-hours care to their beneficiaries (Department of Defense, Health Affairs, 1996). Patient education is another effective strategy, giving the patient more responsibility for his or her health care decisions. Primary care physicians must educate their patients of the alternatives to inappropriately seeking care in the ER (Henry, 1996).

As mentioned previously in this paper, it is important to know the reasons that drive patients' decisions to utilize the ER prior to developing or implementing strategies to decrease utilization. Several studies have been conducted to identify the reasons. In most cases, the patients' reasons were found to have little to do with medical urgency.

In one study, patients sought care in the ER for reasons such as lack of availability of primary care resources, the expanded hours of emergency department availability, ease of transportation to the ER, concern that the problem they had may worsen, reassurance, and convenience (Gill, 1994). Another study conducted by researchers at the University of California - Los Angeles (UCLA) concluded that children who lived in medically underserved communities were more likely to go to an ER for care (Halfon, Newacheck, Wood, & St. Peter, 1996). Results from other research revealed that patients perceive advantages to using the ER

for regular care. It is always open, so patients can avoid the need to take off work or to arrange for child care, and it is the only “guaranteed” access to health care (O’Brien, Stein, Zierler, et al., 1997).

In addition to the previous reasons, a different study conducted in a large, urban, academic general emergency department found that the lack of familiarity with “the system” and improper assumptions of the role of the ER in routine health care were cited by 12.5% of the patients surveyed (Christopher & Marzinski, 1995). Other research found that patients were more satisfied with the care they received in the ER compared to the care they received at a local health clinic (Rubin, 1993).

A group of students from the U.S. Army-Baylor Graduate Program in Healthcare Administration conducted a study of the utilization of an urgent care clinic (UCC) at a large military medical treatment facility. The purpose of the study was to identify the reasons patients sought health care at the UCC as opposed to a primary care location. The mission of the UCC at the facility is to provide acute, primary care to non-emergent patients. The group used a survey to query 249 patients at random as to their reasons for visiting the clinic. The study was consistent with other research; the reasons patients sought care for non-emergent conditions at the UCC were the patients’ beliefs that they had medical conditions requiring immediate medical attention and that access to primary care was not available (Korody, Wegner, Soh, Prior, & Irwin, 1997).

A study was conducted in 1996 to characterize the reasons ambulatory patients use hospital emergency departments for outpatient care. The research group, led by Gary P. Young, conducted a cross-sectional survey during a single 24-hour period of time in 56 hospital emergency departments across the nation. The motivation for the study was based on the view

that, to discourage “inappropriate” emergency department visits by non-urgent patients, managed care organizations and state governments often implement strategies without a clear understanding of the reasons patients use the emergency room for non-urgent problems. The researchers found that most ambulatory care patients seek care in an emergency department because of worrisome symptoms or non-financial barriers to care (Young, Wagner, Kellermann, Ellis, & Bouley, 1996).

### Purpose

The primary objective for conducting this study was to identify the reasons patients categorized as having non-urgent conditions utilized the ER at Irwin Army Community Hospital. It was believed that if there was a better understanding of why patients use the ER in this manner, IACH could analyze current data to develop strategies to direct its patients to more appropriate points of care. Anticipated results of implementing such strategies were believed to include cost savings for the hospital, reduction in workload for an understaffed emergency department, and most important, a better continuum of care for the hospital’s patients.

### Method and Procedures

The research method for this study was a descriptive, cross-sectional design. The setting of the study was the emergency room at Irwin Army Community Hospital, Fort Riley, Kansas. The hospital is a 44-bed facility that serves a user population of approximately 30,000 people. Patients who presented to the ER at Irwin Army Community Hospital between 16 February 1999 and 14 March 1999, and who were assessed as having a non-urgent medical condition, were eligible to participate in this study. Once the triage nurse assessed the patient to determine the urgency of his or her condition, the attending physician validated the triage levels. Level 3 (non-urgent) was defined as a condition that can wait 24 hours for treatment. Patients triaged as Level

4 (routine) were also considered non-urgent for the purpose of this study. Level 4 was defined as a condition that posed no immediate threat and that could wait up to a week to be seen, preferably in a primary clinic setting. Patients were not able to “self-triage”, or, to independently determine the seriousness of their conditions. Triage nurse assessments have been found to be more accurate than patients’ perception of the seriousness of their condition (Young et al., 1996).

Upon being placed in an exam room in the ER, a staff member provided a short questionnaire (see Appendix) consisting of structured, or closed, questions to patients who were determined to have non-urgent conditions. If patients made multiple visits to the ER during the study period, they were still offered questionnaires since their reasons for visiting the ER prior may have varied among subsequent visits. After reading a brief set of instructions on the cover sheet, patients were asked to select at least one response from a list of options to eight questions. Question seven was partially derived from a survey used in another study (Young et al., 1996). Additionally, patients could also list “other” and specify their respective responses for items three, four, six, and seven. Once patients completed the questionnaire, they were instructed to seal it in the accompanying envelope. Patients who refused to participate were asked to check a box indicating their choice and to also seal the questionnaire in the envelope. Patients could then return the envelopes to a member of the ER staff or they could place the envelopes in a designated drop box located at the registration desk.

The design of the questionnaire was appropriate for measuring the reasons patients chose to visit the ER. Using an accounting scheme, multiple responses were offered based on the results

of similar studies. Responses inherent to the military environment were also included. The accounting scheme ensured that the reasons asked for were relevant causes or influences upon the actions, attitudes, and intentions under study (Cooper & Emory, 1995).

The questionnaire contained the following items: (1) What is the patient's age? (2) What is the patient's gender? (3) Please select the category below that applies to the patient being seen for this visit to the emergency room. (This question refers to the patient's beneficiary status.) (4) Where does the patient regularly go to get medical care? (5) How often has this patient visited a hospital emergency room for medical care in the last 12 months? (6) What type of health insurance does the patient have? (7) Why did you choose to use this emergency room for this visit instead of going to a doctor's office? (Patients were allowed to provide more than one response.) (8) Were the items on this questionnaire easy to understand? (Respondents were given the opportunity to provide specific feedback on the design of the questionnaire.)

The hospital's ethics committee reviewed and approved the questionnaire to ensure that no ethical issues occurred as a result of its use. Patients were informed in writing on the cover sheet of the questionnaire that their responses would be used as part of a research study. Participation in this process was strictly voluntary and anonymous to protect patient confidentiality. No personal information, such as name or social security number, was asked from the patients. Patients were allowed to complete the questionnaire independently. Patients were also informed that their participation or refusal to participate would in no way affect the time in which they would wait to be seen by a physician in the ER.

To enhance reliability and validity, the questionnaire was piloted for a period of 14 days to ensure that the patients who were asked to provide information could easily understand and respond to the items on the instrument. A total of 200 questionnaires were distributed to patients

during the pilot phase. Of the 155 questionnaires that were returned, only 19 were excluded due to incomplete responses. Three patients refused to participate. One hundred thirty-four of the 136 patients indicated that the questions were easy to understand based on their responses to item eight. Additionally, this investigator interviewed selected patients at random upon their completing the questionnaires to verify that they, in fact, understood the full context of the items.

## Results

### Response Rate

A total of 2,509 patients presented to the emergency room at Irwin Army Community Hospital during the study period. Of that number, 2,333 patients (93.0%) were triaged and determined to have a non-urgent condition. Due to the difficulty of the ER staff nurses to consistently distribute questionnaires in addition to performing their existing duties, only 380 (16.6%) of the eligible participants were offered questionnaires. Thirty-seven questionnaires (9.7%) were unaccounted for; 31 questionnaires (8.2%) were excluded due to lack of complete information; and 16 patients (4.2%) refused to participate. A total of 296 questionnaires (77.9%) remained in the database.

### Respondent Demographics and Insurance Status

Table 1 displays demographics and insurance status of the study's participants. The median age of eligible study participants was 20 years (range, 1 year to 84 years). For simplicity, all children in the age of 0-23 months were counted as a one-year old. One hundred fifty-five patients (52.4%) were female and 139 participants (47.0%) were male. One hundred eighteen participants (39.9%) were 18 years or younger and six patients (2.0%) were 65 years

and older. Two participants (.1%) did not list their ages on their questionnaires.

A total of 280 respondents (94.6%) reported having some type of health insurance. Two hundred fifty-four participants (85.8%) identified TRICARE Prime as their insurance. Of the 254 Prime patients, 71 patients (28%) were active duty military service members. Twenty-six patients (8.8%) stated that they had health insurance other than TRICARE Prime. Other insurance included other TRICARE plans, Medicare, Medicaid, and civilian companies. Twelve patients (4.1%) indicated that they had no health insurance. Four patients (1.4%) did not answer the insurance item on the questionnaire.

#### Location of Regular Medical Care

A total of 209 patients (70.1%) identified a clinic at Irwin Army Community Hospital as their regular source of medical care. One hundred sixty-one patients stated that either Primary Care Clinic 1 or Primary Care Clinic 2 was their regular source of medical care. Of that number, 146 respondents (69.9%) were enrolled in TRICARE Prime. Of the 71 active duty soldiers, 64 (90.1%) identified their troop medical clinic/battalion aid station or a clinic at Irwin Army Community Hospital as their primary sources of medical care. A total of 14 respondents (4.7%) identified an emergency room as their primary source of medical care. Eleven of the 14 patients (78.6%) were enrolled in TRICARE Prime, including two active duty service members. Of the 12 respondents who had no health insurance, six patients (50%) either identified an emergency room as their regular source of care or had no regular care provider (Table 2).

#### Frequency of Emergency Room Utilization

Table 3 shows the frequency of emergency room utilization at IACH during the study period. A total of 172 respondents (58.1%) stated that they made two to four visits to an emergency room within the last 12 months. Of that number, 162 patients (94.2%) were enrolled

in TRICARE Prime. Of those patients enrolled in Prime, 117 respondents (72.2%) were family members of active duty military personnel. Eighty-eight patients (29.7%) indicated that they made their first visit to an emergency room within the last 12 months at they completed their questionnaires. Of that number, 70 patients (79.5%) were enrolled in TRICARE Prime. It is notable that during the study period, 998 visits (41.4%) to the IACH emergency room were between the hours of 8:00 a.m. and 4:00 p.m., which are hours that the hospital's primary care clinics are operational (see Figure 1). The number of patients from that group who were enrolled in TRICARE Prime was not determined.

#### Reasons for Visiting the Emergency Room

The SPSS statistical software program, version 9.0, was utilized to analyze the reasons patients provided for visiting the emergency room (1999). Since patients were allowed to provide more than one reason for using the emergency room, the multiple response analysis method was selected. Four identical variables, which were the different reasons patients provided, were grouped into one multiple category set. Using that set, frequencies of reasons were computed. Variables were matched across the response sets, which resulted in a total of 482 responses provided by the 296 study participants.

Table 4 shows reasons patients indicated for seeking care in the emergency room and compares the responses of patients by insurance status. Each patient who responded to the insurance status question was classified as being enrolled in TRICARE Prime, having insurance other than TRICARE Prime, or having no insurance. Overall, a total of 142 patients (48%) stated that they believed they had an emergency or that their conditions required medical treatment within the next two to four hours. Sixteen patients (5.4%) who presented responded that they were too sick to go anywhere else for care. One hundred nine respondents (36.8%)

cited factors pertaining to access to primary care as reasons for utilizing the emergency room. Of that number, 54 patients (43.2%) stated that their primary care clinic/doctor's office was not operational at convenient times. Thirty-six patients (25.4%) responded that they tried to obtain primary care for their respective medical problems, but that no appointments were available. Additionally, 19 patients (15.2%) indicated that they could not leave work during the hours their clinic was open, while 14 patients (11.2%) claimed that their clinic does not accept walk-ins. Some patients chose the option "get diagnosis and treatment" as a reason for visiting the ER. However, this investigator later determined that this option was not clear, since all providers aim to provide diagnosis and treatment regardless of what setting in which they practice. Therefore, responses to this option were excluded from the analysis. A more appropriate option may have been that the respondent "gets diagnosis and treatment in a prompt manner" by visiting the emergency room.

Table 5 displays the reasons why patients utilized the emergency room and compares various patient beneficiary categories. Thirty-five soldiers (49.3%) cited a perceived emergent condition while 31 active duty service members (43.7%) indicated an inability to visit their primary care clinic as another reason for utilizing the emergency room. Nine active duty soldiers (12.7%) believed that their supervisors harbored negative attitudes toward soldiers who attended sick call. Of the total number of active duty family members, 84 (48.0%) stated that they had an emergency. Thirty-eight patients (21.7%) responded that their location of primary care was not open at convenient times and 26 patients (14.9%) claimed that they utilized the ER after they were unsuccessful in their attempt to obtain primary care services. Seven military retirees (53.8%) stated that they had emergent conditions. For family members of retirees, 13 patients (46.4%) indicated that they had an emergent condition. Six retiree family members (21.4%)

reported that a telephone advice nurse referred them to the ER.

### Discussion

The results of this study revealed that patient perception of an emergency, issues pertaining to access to primary care, and issues relating to satisfaction and quality were the main reasons patients chose to utilize the emergency room at Irwin Army Community Hospital. These findings are consistent with other studies mentioned in the literature review. Additionally, financial reasons were not major factors in patients' decisions to ER use.

Patients' perception of an emergency was the most prevalent reason cited for non-urgent patients seeking care in the emergency room, even when the total number of responses were broken down and examined both by beneficiary category and by insurance status. This is an issue that warrants attention because of the potential conflicts that could arise when the perceptions of patients and health care providers, who determine urgency and prioritize accordingly among all patients, are not aligned. An example that is most evident involves patient waiting times in the emergency room. Once patients are screened and triaged, they must wait to be seen by a care provider based on the urgency of their respective medical conditions compared to the other patients who present. Waiting times for non-urgent patients at Irwin Army Community Hospital have often exceeded six hours. In many instances, patients become frustrated and angry, which leads to a perception that the ER staff is uncaring or inefficient. Many patients are not aware that the emergency room is staffed based on the capabilities to treat emergent conditions. In fact, several patients provided unsolicited, negative comments in the blank spaces of their questionnaires, almost all of which pertained to their dissatisfaction with the length of time they had to wait before being seen and treated by a provider.

Differences in patient and provider perceptions can be exacerbated in the emergency room

setting because non-urgent patients may not know they have been triaged as non-urgent, are not aware of the implications involved with being assessed as non-urgent, or both. In addition to the comments some patients provided in their questionnaires regarding wait times, other comments were given regarding displeasure of patients not being made aware of their respective triage levels. In cases that they did obtain their triage levels, they were not informed of the definitions and expectations of the various levels. If patients are not knowledgeable of the intricacies of the operations in the emergency room, they may rely on “other” criteria to use as a benchmark to further develop their perceptions. For example, while sitting in the waiting room, some patients have been observed comparing their conditions with other patients who present and who are examined and treated more expediently. In these instances, frustration developed because these patients were likely unfamiliar with the policies and procedures that determine order of treatment in an emergency room environment.

Efforts to educate the hospital’s patients could close the gap between patient and provider perceptions. Patients are more likely to change their perceptions if they are informed about the hospital’s services, policies, and procedures. IACH has recently begun to distribute an informational brochure to all patients who present to the emergency room (Irwin Army Community Hospital, 1999). The brochure defines triage and explains all four triage levels used to assess patients. The brochure further informs level 3 and level 4 patients that they could possibly experience waiting times up to or exceeding six hours and outlines the options available for those particular patients. TRICARE Prime patients can pursue self-care, obtain assistance from the TRICARE Line for Care, which is a telephone advice line that provides assistance to Prime patients, attempt to make a primary care appointment at the hospital (appointment lines are only available between the hours of 7:30 a.m. to 4:30 p.m.), or wait to be seen in the ER.

The brochure lists three options for patients not enrolled in Prime: sign up for TRICARE Prime (if eligible), pursue self-care, or wait to be seen in the ER. During their encounters with patients, physicians and other staff members can assist in changing patient perceptions by communicating the potential disadvantages for seeking care for non-urgent conditions in an emergency room. This can be accomplished by providers emphasizing the importance of patients being integrated into a primary care setting, in which their health needs can be managed and monitored by establishing a continuum of care.

Other common reasons patients utilized the emergency room at Irwin Army Community Hospital related to difficulties in accessing primary care sources. First, convenience was an important aspect to the respondents. Of the total number of respondents enrolled in TRICARE Prime, 51 patients (20%) stated that their primary care clinic was not open during convenient hours. Thirty-one active duty military service members indicated that they had to utilize the ER because they were unable to visit their designated source of primary care, which at Fort Riley is termed sick call and is provided at either the Consolidated Troop Medical Clinic (CTMC) or Irwin Army Community Hospital. However, whether or not the inability to obtain primary care related to convenience is not completely clear, as indicated by the nine respondents who perceived a negative attitude on the part of their supervisors toward soldiers who attended sick call. Nineteen patients indicated that they had difficulty leaving their jobs to attend their respective primary care sources during operational hours. If patients find obtaining medical care for minor and routine problems to be a hassle or to be inconvenient, then there is potential for their problems to develop into more serious conditions, resulting in requirements for more frequent and intensified care in the future. Additionally, hospitals would incur greater costs since it is likely that services such as radiology, surgery, and laboratory, would be utilized to a

greater extent by patients with advanced problems than by patients receiving regular, non-urgent treatment in a primary care continuum.

Irwin Army Community Hospital did not offer after-hours or weekend appointments at the inception of this study. Researchers have stated that non-urgent use of the ER cannot be labeled inappropriate if treatment cannot be secured at an alternate location (Young et al., 1996).

Effective 1 March 1999, IACH opened an extended hours clinic that is operational between the hours of 4:30 p.m. and 7:00 p.m. each Tuesday and Thursday. This clinic is only for patients who are enrolled in TRICARE Prime. Staffing is provided by two of the hospital's existing primary care teams that work on a rotational basis. Additional appointments were not added; physicians working the clinics simply arrive later in the day to their regular clinic and begin seeing patients at that time. A total of 28 appointments is available during each extended clinic operating day and can be accessed through the existing hospital's patient appointment system. If appointments during these times are not filled through normal booking, Prime patients who present to the emergency room and are triaged as a Level 3 or 4 are diverted to the extended hours clinic. Since its implementation, only two appointment time slots in the extended hours clinic have gone unfilled.

Second, primary care sources must be able to accommodate their patients, especially to those patients enrolled in their health plans. Thirty-two respondents (12.6%) in TRICARE Prime stated that they tried to make appointments with their primary care managers, but none were available, leaving them to choose between attempting to obtain an appointment on the next business day, delaying or foregoing the visit altogether, or, in these instances, seeking care in the emergency room. Twelve Prime patients (4.7%) did not believe that their clinics would accept

them on a walk-in basis. Currently, Irwin Army Community Hospital is at 75.6% capacity in terms of TRICARE Prime enrollment versus maximum capacity. Since 1 March 1999, there have been unfilled appointment slots in the hospital's primary care clinics on a daily basis. However, 998 patients presented to the emergency room during the study period during hours that the primary care clinics are open. This is similar to another study, in which 68.8% of ER visits at a university hospital were during hours of regular primary care clinic operation (Glick & Thompson, 1997). Nevertheless, patients enrolled in TRICARE Prime who are unable to make a same-day, acute appointment when all appointments in their clinics are booked may either schedule a routine appointment, in which they must be seen within one week, or may attempt to be seen as a walk-in. If patients choose a walk-in status, they will be seen in their clinic on the day of their visit, but may incur long waiting times. Prime patients who present to the ER during normal clinic hours and are non-urgent are diverted to one of the hospital's primary care clinics, either through appointments or as walk-ins.

Patients who cannot access primary care appointments may try other options before using the emergency room as a last resort. Nurse telephone triage lines are common throughout most health systems in the United States. This resource provides information to patients that can assist them in making health care decisions, such as when and where to seek medical attention. Irwin Army Hospital does not operate a dedicated nurse advice line. During clinic hours, nurses in the respective clinics may advise their patients on certain health care matters. After hours, emergency room nurses are susceptible to receiving similar calls from patients. Due to the difficulty in assessing a patient who is not physically present, along with the fast pace of events

in this setting, ER nurses are not best suited to staffing telephones for the purpose of giving advice. Patients enrolled in TRICARE Prime have access to the TRICARE Line for Care (TLC). However, if the advice patients receive from the TLC is to call their primary care managers, then patients have to use the ER since there are no primary care physicians on call at IACH. The next option for patients who need immediate attention, or who perceive they need immediate attention, is to visit the emergency room. In this study, 63 patients (21.3%) stated that they were instructed to go to an ER by a health care provider or an advice nurse. Of that total, 52 patients (82.5%) were those who stated that they were enrolled in TRICARE Prime.

Although capacity for additional primary care at Irwin Army Community Hospital exists, the results of this study revealed a patient demand for care outside of normal clinic operating hours. One recommendation is that Irwin Army Community Hospital conduct analysis on utilization of the emergency room to determine which days of the week generate the greatest patient demand. Once completed, IACH should consider options to expand the after-hours clinic concept to include days of historically high demand, especially on days that follow holidays. The hospital staff should also conduct analysis to develop options of offering primary care services during designated times on weekends within the facility's current manpower and budget constraints. Options may include utilizing military primary care providers on a rotational basis, contracting for civilian providers to staff weekend clinics, or entering into agreements with primary care assets in the local community who would operate weekend clinic hours and who would be willing to participate in the TRICARE network of providers.

Another recommendation is to seriously consider an existing proposal to establish a dedicated telephone nurse advice and triage line internal to Irwin Army Community Hospital.

This line would be available to patients 24 hours a day, including weekends and holidays. The advice line staff would be able to make patient appointments and could arrange for minor prescriptions, such as over-the-counter medication, without requiring those patients to make a clinic visit. Additionally, TRICARE Prime patients who are out of the Fort Riley area and require medical attention at other facilities or with out-of-network providers could obtain immediate authorization or denial of their request to use a source of care (Trinkle, 1998). If IACH would be too constrained by lack of personnel or finances to staff a 24-hour dedicated line, then perhaps the alternative of establishing a similar service could be studied. One possibility is to operate a dedicated advice and triage line that is open during the hours in which the volume of patients in the emergency room is greatest.

Reasons relating to satisfaction of care and quality of care should also be considered and further investigated. Although this study was not designed to measure patient satisfaction, a total of 41 patients (13.9%) cited dissatisfaction with their current sources of primary care and/or a perception that the ER staff provided better care than their primary care providers. Thirty of those patients (11.8%) indicated that they were TRICARE Prime enrollees. Fourteen patients (4.7%) identified the ER as their regular location of care, 11 (78.6%) of whom stated that they were enrolled in TRICARE Prime. There are serious implications to both patients and hospitals if patients are not obtaining their primary care needs in the most appropriate point of service. Patients using the ER and other irregular sources of care cannot have their health closely monitored. Furthermore, relationships between patients and physicians cannot be established, which could undermine patient education efforts. As mentioned in the literature review, it is more costly to treat patients in the ER than in a primary care setting. In the military environment, hospitals that do not entice patients to be treated in primary care clinics could face

uncertain futures. Under the concept of Enrollment Based Capitation (EBC), up to 75% of funding for military medical facilities (MTF) will be determined by the number of beneficiaries enrolled in TRICARE Prime that utilize their internal primary care resources. If patients aren't satisfied with existing primary care assets, and if they are willing to forego co-payments of 15% or 20%, then they may choose other health plan options that will please them. Targeting potential customers and designing products and services to satisfy their demands and needs are vital for an organization's success, and in some cases, survival.

Patients did not consider financial matters to be important reasons for choosing to utilize the ER for their non-urgent needs. Because of the high percentage of users who are enrolled in TRICARE Prime, they do not have to pay for ER visits. Additionally, IACH cannot directly bill patients for receiving care at the facility, although the hospital does attempt to recover some costs through third-party collections. If patients do not have a financial disincentive to obtain health care, then they are likely to attempt to access care and services that may not be necessary. Although TRICARE Prime patients do not individually pay premiums, the overall military health system bears the burden of higher costs. TRICARE was mandated by Congress in part to control costs, but if that objective is not achieved, lawmakers may search for alternatives to provide the health benefit to military beneficiaries.

When patients use more medical services because their insurance covers 80% or more of the cost of those services, the insurance industry refers to this behavior as a moral hazard (Feldstein, 1994). Moral hazard has resulted in excessive use of health service, increased cost of care, and increased insurance premiums. The patients of IACH may be displaying this behavior as indicated by the frequency of ER use per patient. This study revealed that 162 patients

(55.5%) who were enrolled in TRICARE Prime utilized the emergency room between two and four times during the last 12 months. The urgency of the conditions that those patients presented with during prior visits is not clear; however, it is prudent to believe that the majority of those visits were for non-urgent problems as well.

This study has several limitations. First, the majority of the answers obtained from the respondents of the questionnaire were not independently verified. For example, since the questionnaire was designed to be anonymous, validation of insurance status could not be accomplished. Two hundred fifty-four family members of active duty military personnel (96.5%) who participated in the study stated that they were enrolled in TRICARE Prime. As of 8 April 1999, the overall enrollment percentage in TRICARE Prime for family members of active duty soldiers was 75.6%. Beneficiaries eligible for TRICARE Prime must enroll upon arriving to Ft. Riley and must reenroll annually, either in person by visiting a TRICARE Service Center or by mailing forms to the region's TRICARE business office. If one or both of the previous actions are not taken, then the eligible beneficiary will likely not be considered a Prime patient. Automation system discrepancies can also place beneficiary status in question since both the military's beneficiary database and the TRICARE contractor's database are used to manage information in the military health system. In some cases, information in the two separate databases does not match.

For the purpose of this study, all active duty military personnel who participated were considered enrolled in TRICARE Prime regardless of how service members responded to the corresponding item on the questionnaire. Theoretically, all active duty service members are supposed to be enrolled in TRICARE Prime. However, this population is still required to enroll

and to annually reenroll like other beneficiaries. Again, if action is not taken by active duty service members, they may not show up in the automation systems as being enrolled. As of 8 April 1999, 95.7% of active duty service members at Fort Riley were in TRICARE Prime.

A second limitation of the study was the consistency of the triage assessments utilized by the triage nurses and physicians in the emergency room. The triage policy used in the ER defines the urgency categories. A computer algorithm program utilized by medical personnel who conduct initial patient screening also provides a triage level based on the responses of patients during the screening. Still, physicians and senior triage nurses make the final determination of triage levels. Although these assigned levels are almost always accurate, they are subjective and are based on the comparison between the assessed seriousness of the respective conditions and a likelihood of the worsening of those conditions over time.

Third, this study was conducted in only one facility. Therefore, the results cannot be generalized to all military treatment facilities or to the United States' population as a whole. Because this study was conducted at a military facility, the number of active duty service members and their family members made up a disproportionate number of respondents when compared to other groups. It may have been more useful to narrow the study to determine the reasons patients enrolled in TRICARE Prime utilized the ER. TRICARE Prime patients comprised 1,689 (67.3 %) of the total patient visits to the emergency room during the study period. Figure 2 displays the total number of daily patient visits to the IACH emergency room. The figure also shows the number of the total daily visits that were by patients with non-urgent conditions as well as the total daily visits by patients enrolled in TRICARE Prime.

### Conclusions and Recommendations

The results of this study supported the beliefs shared by many of the leaders at Irwin Army

Community Hospital regarding the reasons patients with non-urgent conditions utilized the emergency room. Patient perceptions of emergent conditions, access to primary care, and satisfaction and quality of care were cited by the participants of this study to explain their decisions to present to the ER. Now that more is known about what the predominant reasons are, further analysis is needed to determine if the current organizational structure and existing health care services are adequate to meet the demands of patients who utilize Irwin Army Community Hospital. Strategies or concepts that should be considered include comprehensive patient education efforts to close the gap between different perceptions, emphasis in enrolling patients into primary care clinics, the addition or redesign of primary care services to meet patient demand for enhanced convenience and access, and continued initiatives to improve quality and customer service. The results of patients who are informed and are satisfied with their care are a better overall health status for the population and an efficient, financially viable hospital that can respond to the community for which it provides care.

Table 1

Demographic Information and Insurance Status of Study Patients (N=296)

	No. (%)
Demographic Information	
Gender	
Male	139 (47.0)
Female	155 (52.4)
Age	
Median , years	20
1-18 years	118 (39.9)
19-64 years	170 (57.4)
65 years and up	6 (2.0)
Insurance Status	
TRICARE Prime	254 (85.8)
Other than TRICARE Prime	26 (8.8)
No Insurance	12 (4.1)

Note. Interquartile range is 6 to 28 years.

Note. 2 respondents did not answer gender item; 2 respondents did not answer age item;

4 respondents did not answer beneficiary item.

Table 2

Location of Regular Source of Medical Care of Study Patients (N=296)

	No. (%)
Location	
Primary Care clinics, IACH	161 (54.4)
Pediatric clinic, IACH	39 (13.2)
Internal Medicine clinic, IACH	9 (3.0)
Consolidated Troop Medical Clinic (CTMC)/Battalion Aid Station (BAS)	44 (14.9)
Civilian provider	8 (2.7)
Emergency Room, IACH	13 (4.4)
Emergency Room, other facility	1 (0.3)
No regular care provider	15 (5.1)
Other	5 (1.7)

Note. 1 respondent did not answer location item on questionnaire

Note. CTMC/BAS for active duty military personnel only.

Table 3

Frequency of Emergency Room (ER) Visits in the Past 12 Months by Age, Insurance Status, and BeneficiaryStatus of Study Patients (N=296)

	First Visit, No. (%) (n=88)	2-4 Visits, No. (%) (n=172)	5-9 Visits, No. (%) (n=23)	10 Visits and Above No. (%) (n=6)
<b>Age</b>				
1-18 years	28 (31.8)	76 (44.2)	13 (56.5)	0 (0.0)
19-64 years	59 (67.1)	92 (53.5)	9 (39.1)	6 (100.0)
65 years and over	1 (1.1)	2 (1.2)	1 (4.3)	0 (0.0)
<b>Insurance Status</b>				
TRICARE Prime	71 (80.7)	162 (94.2)	16 (70.0)	3 (50.0)
Other than TRICARE Prime	13 (14.8)	6 (3.5)	5 (21.7)	1 (16.7)
No insurance	3 (3.4)	4 (2.3)	2 (8.7)	2 (33.3)
<b>Beneficiary Status</b>				
Active duty military	30 (34.1)	36 (21.0)	3 (13.0)	1 (16.7)
Family member, active duty military	38 (43.2)	119 (69.2)	16 (70.0)	0 (0.0)
Military retiree	8 (9.1)	3 (1.7)	1 (4.3)	0 (0.0)
Family member, military retiree	7 (8.0)	12 (7.0)	2 (8.7)	5 (83.3)
Civilian	3 (3.4)	2 (1.2)	1 (4.3)	0 (0.0)

Note. 7 respondents did not answer frequency item on questionnaire; 2 respondents did not answer age item on questionnaire; 4 respondents did not answer insurance status item on questionnaire; 2 respondents did not answer beneficiary status item on questionnaire.

Table 4

Reasons for Non-Urgent Patient Visits to the Emergency Room, Irwin Army Community Hospital, by InsuranceStatus (N=296).

Reasons for ER Visits	All Patients, No. (N=296)	TRICARE Prime, No. (n=254)	Non-Prime, No. (n=26)	No Insurance, No. (n=12)
Perceived emergent/urgent condition	142	124	14	3
Told to go to ER by health care provider	31	28	2	1
Told to go to ER by telephone advice nurse	32	24	5	2
Too sick to go elsewhere	16	14	1	1
Perceived better care in the ER	32	23	7	2
Not satisfied with primary care	9	7	1	0
Clinic not open at convenient time	54	51	2	0
Could not get off work during clinic hours	19	16	2	1
No appointments available	36	32	2	2
Clinic does not take walk-ins	14	12	2	0
Live too far from clinic	2	1	0	1
Military - unable to go to sick call	33	31	2	0
Military - chain of command negative to sick call	9	9	0	0
Transportation problems	6	4	1	1
No health insurance	4	0	0	4
Cannot afford to pay for a clinic visit	5	1	2	2
Do not have to pay out of pocket for care in ER	16	12	2	2
Other	19	17	1	1

Note. Patients could give more than one reason, so response totals are greater than actual patient totals; 4 respondents did not answer insurance item on questionnaire.

Table 5

Reasons for Non-urgent Patient Visits to the Emergency Room, Irwin Army Community Hospital, by Beneficiary Category (N=296).

Reasons for ER Visits	Active Duty Military	Family Members, Active Duty	Military Retirees	Family Members, Retirees,	Civilian,
	No. (%) (n=71)	No. (%) (n=175)	No. (%) (n=13)	No. (%) (n=28)	No. (%) (n=6)
Perceived emergent/urgent condition	35 (49.3)	84 (48.0)	7 (53.8)	13 (46.4)	3 (50.0)
Told to go to ER by health care provider	8 (11.3)	19 (10.9)	2 (15.4)	2 (7.1)	0 (0.0)
Told to go to ER by telephone advice nurse	3 (4.2)	18 (10.3)	2 (15.4)	6 (21.4)	1 (16.7)
Too sick to go elsewhere	5 (7.0)	9 (5.1)	1 (7.7)	1 (3.6)	0 (0.0)
Perceived better care in the ER	12 (16.9)	11 (6.3)	4 (30.8)	4 (14.3)	0 (0.0)
Not satisfied with primary care	3 (4.2)	6 (3.4)	0 (0.0)	0 (0.0)	0 (0.0)
Clinic not open at convenient time	9 (12.7)	38 (21.7)	1 (7.7)	6 (21.4)	0 (0.0)
Could not get off work during clinic hours	4 (5.6)	11 (6.3)	1 (7.7)	3 (10.7)	0 (0.0)
No appointments available	4 (5.6)	26 (14.9)	2 (15.4)	3 (10.7)	1 (16.7)
Clinic does not take walk-ins	0 (0.0)	12 (6.9)	1 (7.7)	1 (3.6)	0 (0.0)
Live too far from clinic	1 (1.4)	0 (0.0)	0 (0.0)	1 (3.6)	0 (0.0)
Military - unable to go to sick call	31 (43.7)	-	-	-	-
Military - chain of command negative to sick call	9 (12.7)	-	-	-	-
Transportation problems	0 (0.0)	5 (2.9)	0 (0.0)	1 (3.6)	0 (0.0)
No health insurance	0 (0.0)	1 (0.6)	2 (15.4)	1 (3.6)	0 (0.0)
Cannot afford to pay for a clinic visit	0 (0.0)	1 (0.6)	2 (15.4)	2 (7.1)	0 (0.0)
Do not have to pay out of pocket for care in ER	0 (0.0)	11 (6.3)	0 (0.0)	5 (17.9)	0 (0.0)
Other	3 (4.2)	16 (9.1)	0 (0.0)	2 (7.1)	0 (0.0)

Note. Patients could give more than one reason, so response totals are greater than actual patient totals. 2 respondents did not provide beneficiary status, 1 respondent listed "other".

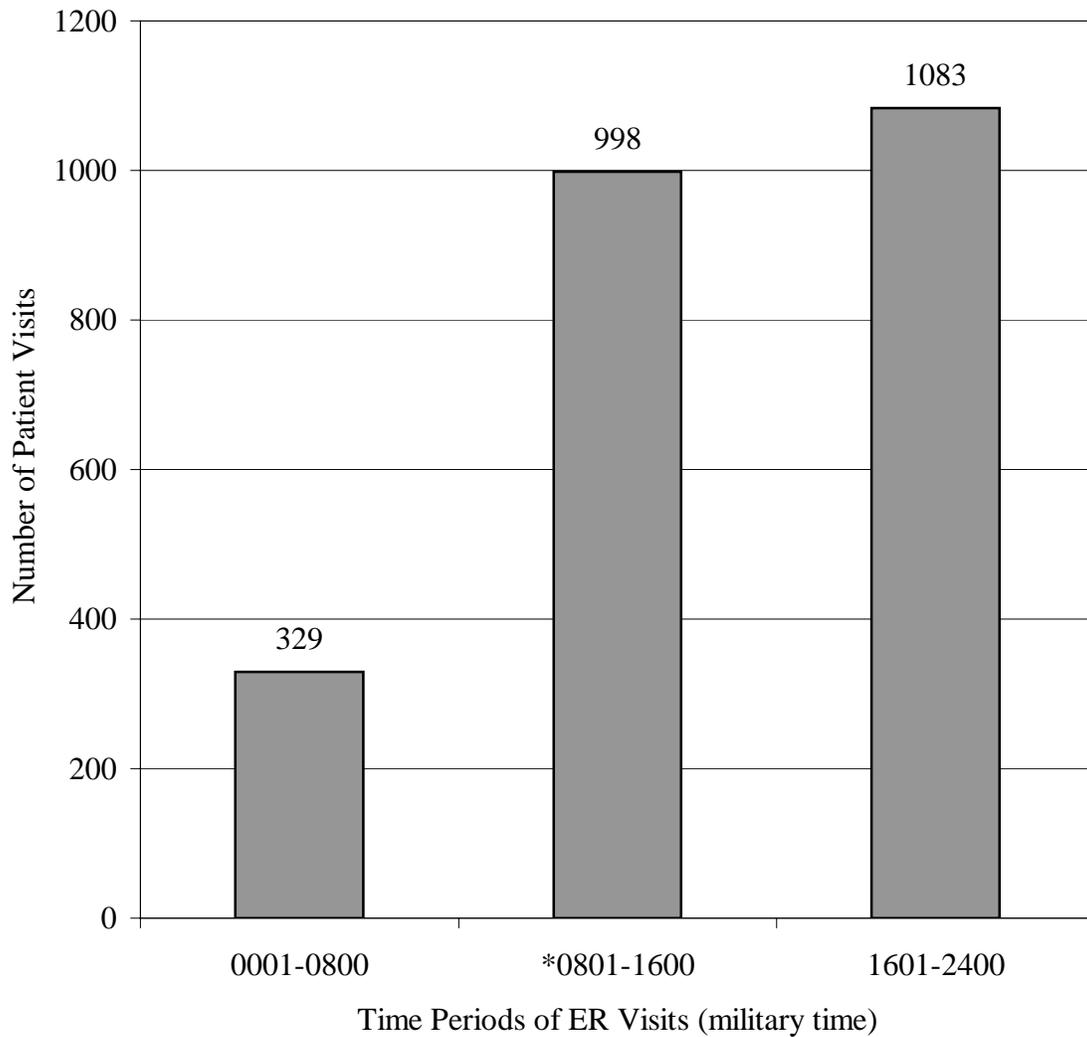


Figure 1. Total visits to ER, Irwin Army Community Hospital, between 16 February and 14 March 1999 by time periods (\*Primary care clinics at the hospital are operational between 0801 and 1600, or 8:01 a.m. to 4:00 p.m., Monday through Friday). Data from 24 February not included due to missing information.

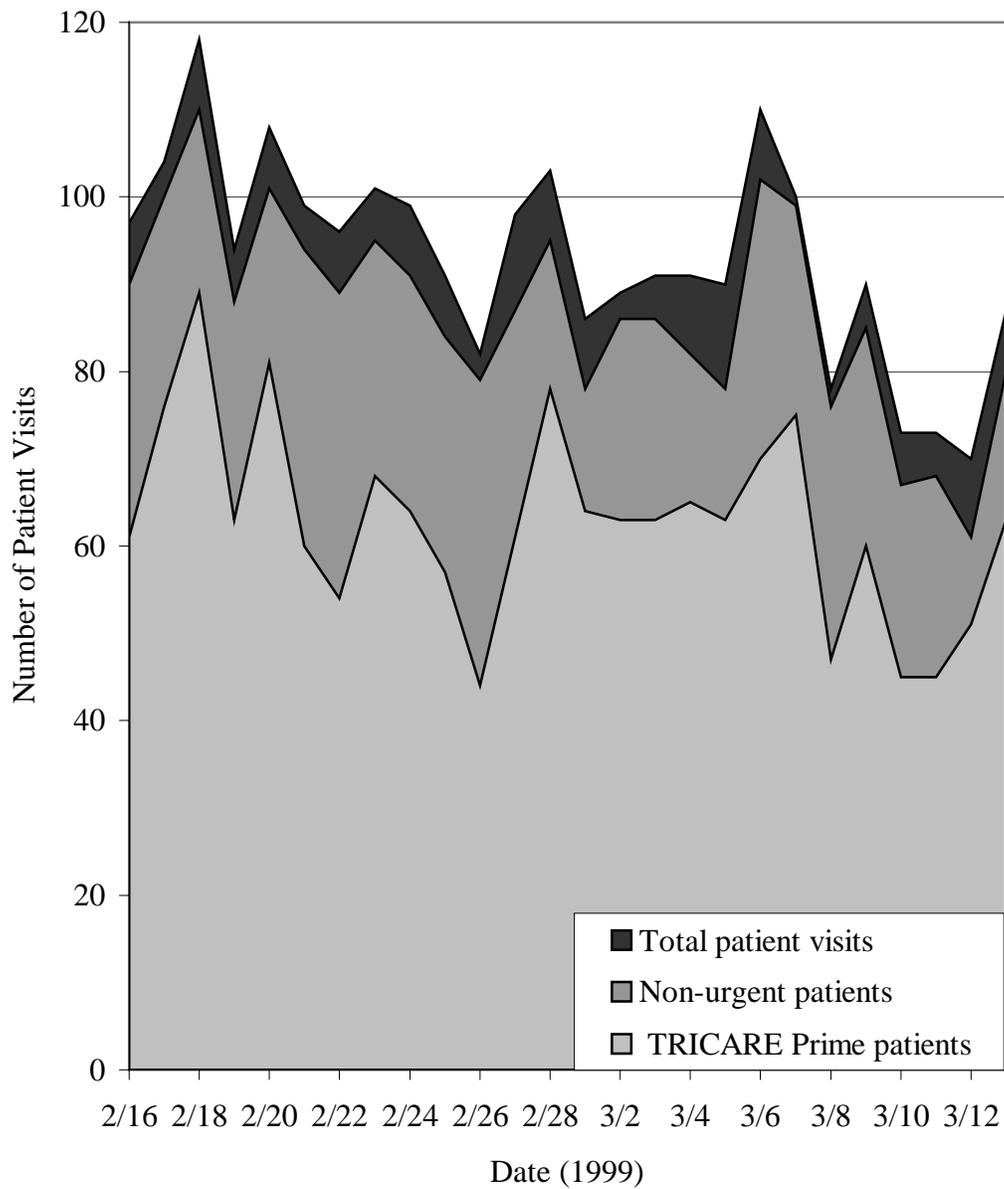


Figure 2. Daily visits to ER, Irwin Army Community Hospital, between 16 February and 14 March 1999 by total patients, by number of total patients who were non-urgent, and by number of total patients who were enrolled in TRICARE Prime.

## Appendix

## Emergency Room Utilization Questionnaire

The purpose of this questionnaire is to collect information pertaining to your visit to this emergency room today. Data collected from you and other patients will be used in important research that may contribute to the hospital's continuous efforts toward providing accessible, quality health care services to our beneficiaries.

Completion of this questionnaire is voluntary and anonymous. To protect your confidentiality, you are not required to identify yourself by name, social security number, or any other method. Your honest responses to the questions are all that is requested. Finally, because the emergency room staff must treat all patients according to the seriousness of their injuries, **completion of this questionnaire will have no impact on how much time you will wait before being seen by a health care provider.** You will receive the same quality of care, regardless of your choice of completing the questionnaire.

If you choose to participate, please answer all items to the best of your knowledge.

If you do not wish to complete this questionnaire, please indicate by placing a check mark in the box:

Once you are finished, please place this questionnaire in the attached envelope, seal the envelope, and place it in the box at the front sign-in desk.

Thank you for your consideration and participation.

Emergency Room Utilization Questionnaire

Today's Date: \_\_\_\_\_

Current Time: \_\_\_\_\_ a.m. or p.m.

1. What is the patient's age? \_\_\_\_\_
2. What is the patient's gender?
  - a. Male
  - b. Female
3. Please select the category below that applies to the patient being seen for this visit to the emergency room (**circle one**):
  - a. Active Duty Military
  - b. Family Member of Active Duty Military
  - c. Military Retiree
  - d. Family Member of Military Retiree
  - e. Civilian
  - f. Don't know
  - g. Other: \_\_\_\_\_
4. Where does this patient regularly go to get medical care? (**circle one**):
  - a. Primary Care Clinic 1 or 2, Irwin Army Community Hospital
  - b. Pediatric Clinic, Irwin Army Community Hospital
  - c. Internal Medicine Clinic, Irwin Army Community Hospital
  - d. CTMC (Consolidated Troop Medical Clinic)
  - e. Other military hospital primary care clinic
  - f. Civilian doctor's office/clinic
  - g. Emergency Room, Irwin Army Community Hospital
  - h. Emergency Room, other military or civilian hospital
  - i. Patient doesn't have a regular doctor or clinic
  - j. Don't know
  - k. Other: \_\_\_\_\_

5. How often has this patient visited a hospital emergency room for medical care in the last 12 months? **(circle one)**:

- a. This is my first visit in the last 12 months
- b. 2-4 times
- c. 5-9 times
- d. 10 times or more

6. What type of health insurance does this patient have? **(circle all that apply)**:

- a. TRICARE Prime enrolled to a clinic at Irwin Army Community Hospital
- b. TRICARE Prime enrolled to a civilian doctor/clinic or to another military hospital
- c. TRICARE Extra
- d. TRICARE Standard
- e. Private Health Insurance
- f. Medicare
- g. Medicaid
- h. I don't have health insurance
- i. Don't Know
- j. Other: \_\_\_\_\_

7. Why did you choose to use this emergency room for this visit instead of going to a doctor's office? **If the person completing this questionnaire is not the patient for this visit, please answer from the patient's point of view. Circle ALL reasons that apply:**
- a. I believe that I have a medical condition that is an emergency or that must be seen within the next 2 to 4 hours
  - b. I was told to go to the emergency room by a health care provider at my clinic
  - c. I was told to go to the emergency room by the TRICARE appointment clerk
  - d. I was told to go to the emergency room by a telephone advice nurse
  - e. I believe that I get better care in the emergency room
  - f. I was unable to go to sick call
  - g. My chain of command has a negative attitude toward soldiers going to sick call
  - h. I'm too sick to go anywhere else
  - i. I get a diagnosis and treatment for my problem
  - j. I'm not satisfied with the care I receive at my doctor's office/clinic
  - k. My doctor's office/clinic is not open at a convenient time for me
  - l. I could not get off of work during the hours that my doctor's office/clinic is open
  - m. No appointments were available when I tried to see my doctor or visit my clinic
  - n. I live too far away from my doctor's office/clinic
  - o. I have transportation problems that prevent me from getting to my doctor's office/clinic
  - p. My doctor's office/clinic does not take walk-in patients
  - q. I do not have health insurance
  - r. I cannot afford to pay for a visit to my doctor/clinic
  - s. I do not have to pay for care I get at this emergency room
  - t. My insurance pays for emergency room care
  - u. Other: \_\_\_\_\_
8. Were the items on the questionnaire easy to understand?
- a. yes
  - b. no

If any questions were not clear, please provide comments here:

Thank you for your participation. Please seal this questionnaire in the envelope provided and return to the front sign-in desk.

## References

- American College of Emergency Physicians (1998). News Release: Emergency Care Access for Federal Health Plan Patients [On-line]. Available: <http://www.acep.org/press/PI980220.HTM>
- Christopher, N. & Marzinski, A. (1995). Factors Contributing to Preferential Use of the ED for Nonurgent Pediatric Care [On-line]. Available: <http://gema.library.ucsf.edu:8081/Originals/SAEMabs/SA63.html>
- Cooper, D. & Emory, C. (1995). Business Research Methods (5th ed.). Chicago: Irwin.
- Department of Defense, Health Affairs (1996). Policy for After-Hours Care for TRICARE Prime Enrollees (96-60) [On-line]. Available: <http://www.ha.osd.mil/tricare/after60.html>
- Feldstein, P. (1994). Health Policy Issues: An Economic Perspective on Health Reform. Ann Arbor, MI: Health Administration Press.
- Gill, J. (1994). Nonurgent Use of the Emergency Department: Appropriate or Not? Annals of Emergency Medicine, 24(5), 953-957.
- Glick, D. & Thompson, K. (1997). Analysis of Emergency Room Use for Primary Care Needs. Nursing Economics, 15(1), 42-49.
- Halfon, N., Newacheck, P., Wood, D., & St. Peter, R. (1996). Using emergency rooms for sick child care [On-line]. Available: <http://www.ph.ucla.edu/shp/pr/WR314.HTML>
- Henry, G. (1996) An Emergency Physician's Complaint: "Your Patients Are Costing Me Money!" [On-line]. Available: <http://www.managedcaremag.com/archiveMC/9607/MC9607.emergency.shtml>
- Irwin Army Community Hospital. (1999). Welcome to Emergency Medical Services [Brochure]. Fort Riley, Kansas: Author.

- Kongstvedt, P. (1996). The Managed Health Care Handbook (3rd ed.). Gaithersburg, Maryland: Aspen Publishers, Inc.
- Korody, C., Wegner, M., Soh, K., Prior, R., & Irwin, C. (1997). Utilization of the Urgent Care Clinic: A Management Project. Unpublished manuscript.
- McNamara, P., Witte, R., & Koning, A. (1993). Patchwork Access. Hospitals, 67(10), 44-46.
- O'Brien, G., Stein, M., Zierler, S., Shapiro, M., O'Sullivan, P., & Woolard, R. (1997). Use of the ED as a Regular Source of Care: Associated Factors Beyond Lack of Health Insurance. Annals of Emergency Medicine, 30(3), 286-291.
- O'Brien, G., Shapiro, M., Fagan, M., Woolard, R., O'Sullivan, P., & Stein, M. (1997). Do Internists and Emergency Physicians Agree on the Appropriateness of Emergency Department Visits? Journal of General Internal Medicine, 12(3), 188-191.
- Petersen, L., Burstin, H., O'Neil, A., Orav, E., & Brennan, T. (1998). Nonurgent Emergency Department Visits. Medical Care, 36(8), 1249-1255.
- Rubin, L. (1993). CUPE-The Non-Urgent Use of Hospital Emergency Rooms [On-line]. Available: <http://www.spea.iupui.edu/cupe/facili/93-u08.htm>
- SPSS Base 9.0 User's Guide (1999). Chicago
- Thompson, T. (1996). Balancing Acts. Hospitals and Health Networks, 70(18), 30-32, 34.
- Trinkle, L. (1998). The Cost of Implementing a Combined Advice and Triage Line: Irwin Army Community Hospital. Graduate management project.
- Williams, R. (1996). The Costs of Visits to Emergency Departments. The New England Journal of Medicine, 334, 642-646.

Winslow, R. (1996, March 7). Emergency Room Visits Fall as HMOs Target Overuse. The Wall Street Journal.

Young, G., Wagner, M., Kellermann, A., Ellis, J., & Bouley, D. (1996). Ambulatory Visits to Hospital Emergency Departments. Journal of the American Medical Association, 276(6), 460-465.