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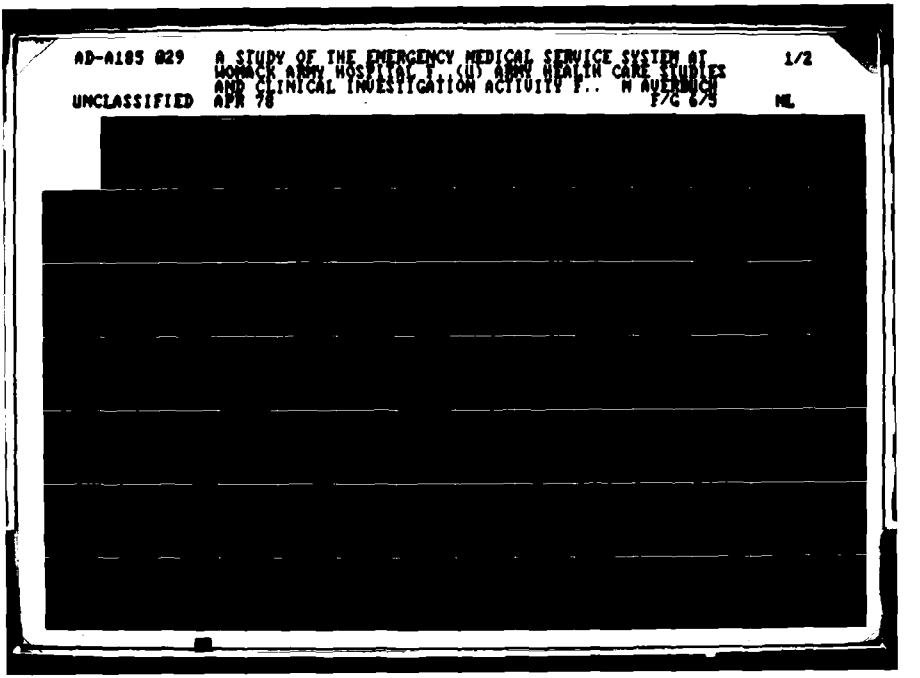

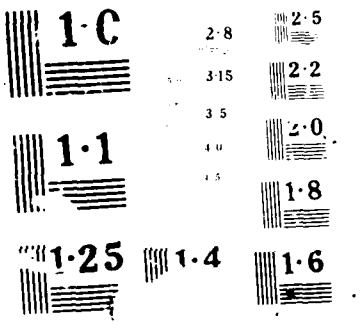
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A STUDY OF THE EMERGENCY MEDICAL SERVICE SYSTEM AT WOMACK ARMY HOSPITAL FORT BRAGG, NORTH CAROLINA

A Problem Solving Research Project

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

of

Master of Health Care Administration

By

Major Michael Averbuch, MSC

Fort Bragg, North Carolina

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This study analyzed and recommended improvements to the emergency medical service system at Womack Army Hospital. After studying the flow of care at the hospital's emergency room the author recommended the adoption of a triage system that utilizes a Physician Assistant to conduct most triage functions.

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CHAPTER I

Background

Fort Bragg, North Carolina, is a 130,696-acre US Army military installation primarily located in Cumberland County, North Carolina. (Pope Air Force Base is located immediately adjacent to the main post area and receives inpatient as well as non-duty hours emergency coverage from Womack Army Hospital. Therefore, all references to Fort Bragg population include Pope Air Force Base). The population at Fort Bragg and in the surrounding two-county area that is eligible for health care exceeds 170,000. Fort Bragg currently houses the XVIII Airborne Corps (which includes the 82nd Airborne Division) and many other large troop units as well as the Special Forces school and groups. The Corps' mission is "to deploy by air on short notice to any part of the world, prepare to fight, or accomplish any other assigned mission." This large troop concentration, combined with the extensive training required to maintain an extremely high state of readiness, results in even greater emphasis on the ability of essential support services, such as the hospital, to

provide care for the soldier and his dependents, as well as the retired community.

The surrounding community, which includes many eligible beneficiaries, is a mixed rural and heavily populated area. Cumberland County is 24% rural with a population of 223,880, while Harnett County is 78% rural with a population of 53,715.[1]

Primary hospital services for this two-county area are provided by the Cumberland County Hospital System, Inc. (Cape Fear Valley Hospital and Highsmith-Rainey together have over 500 beds) and Womack Army Hospital.

The first medical facility to serve Fort Bragg had its beginning in September 1918 with the construction of two dispensaries and a headquarters. The hospital planned as a 500-bed unit, was completed in June 1919.

In June 1932 a new 83-bed, brick structured, fully equipped, and modern hospital was built. This served a post population of 2,200 to 2,500 through most of the 1930's.

Through the next few years, the post gained slowly in population until by 1939 when the population was around 5500.

World War II saw the completion of two cantonment type hospitals: Station Hospital Number Two, in the old Hospital area, was a 2,000-bed hospital; and Station Hospital Number Three was a 920-bed hospital located in the old division area. An additional 6,000 beds were set up as a convalescent hospital in the infantry brigade of the Ninth Division. Approximately 8,680 beds were being used for patients during the height of Warld War II.

By the end of the war in 1945, the 6,000-bed convalescent hospital and Station Hospital Number Three were closed down. Station Hospital Number One was closed in 1947 and converted to an administrative building.

All medical facilities were moved into the old hospital area by 1949. This cantonment hospital became a U.S. Army hospital.

On 3 August 1958, the new nine-story permanent building was dedicated and named in honor of PFC Bryant H. Womack. A native of North Carolina, PFC Womack, a medical aidman during the Korean conflict, won the Medal of Honor posthumously.

A new clinic wing and supply warehouse were added to the hospital in January 1974. Presently, the facility is undergoing a 5.6 million dollar electrical/mechanical

upgrade to meet the requirements of the Joint Commission on Accreditation of Hospitals and the National Life Safety Code of the National Fire Prevention Act.

Womack Army Hospital has 235 operating beds with an average occupied bed rate of 240. During calendar year 1977, there were 800,172 outpatient clinic visits. The total population supported is estimated at 200,000 eligible beneficiaries. A workforce of over 1500 military and civilian personnel are required to deliver this health care. Womack is one of the largest MEDDAC in the U. S. Army.

Conditions Which Prompted The Study

With the end of the draft, the number of physicians assigned began to markedly decrease. As of March, 1978, (excluding 20 Family Practice residents) there were 60 physicians assigned against a recognized requirement of 95. Projections for the remainder of 1978 vary from a "worst case" staffing projection from the Office of The Surgeon General of 47 physicians to an anticipated strength of 52 by the end of 1978 (Appendix A). Specialties of internal medicine, OB/GYN, orthopedics, anesthesiology and general medical officers will have very severe shortages.

This reduction of capability has placed additional pressures on the emergency medical service. The current lack

of full-time emergency room physicians necessitates use of other staff physicians to provide 24-hour-a-day coverage, which reduces their capability to deliver specialty care.

Averaging the actual ER workload over the period of calendar year 1974 thru 1977 the average number of visits for a year is 77,950, which is 6,496 each month. Further breaking the workload down, the average weekday number of patients is 184 and 275 on a weekend or holiday. The range of average monthly visits is only between 6,302 and 6,744 for the four-year period analyzed.

This large demand for service from the emergency room has remained fairly constant over an extended period of time, in spite of many different staffing and organizational delivery patterns that were utilized during these four years. Recognizing that the workload is extensive, but the resources available to provide the service are diminishing has precipitated a multifaceted review of Womack Army Hospital's Emergency Medical Service. Given that the demand for care will not diminish, and, in fact, may increase as specialty clinic appointments become more difficult to obtain, this effort has been concentrated on finding methods to improve the quality and efficiency

of services being provided instead of methods to alter demand patterns. This led to a specific problem statement that this Problem-Solving Project was to focus on.

Problem Statement

The problem was to analyze the current hospital emergency medical service system at Womack Army Hospital, Fort Bragg, N. C., and make recommendations for improvement to the system.

Limits to Problem Solving Options

There is very limited funding available within Health Services Command for minor construction and the length of time it takes to approval and have a project physically begun (even when funded) is usually six to twelve months. Therefore, a basic limitation to reorganizing delivery of emergency medical services was utilization of the existing physical layout (Appendix B). The plan, if it was to be implemented this fiscal year, could not rely on additional space being constructed.

The severe shortage of available Medical Corps officers for the coming year also placed a restriction on possible solutions. The Health Service Command manpower survey team recognized a requirement for six full-time

general medical officers for the emergency room. These will not be available, therefore full time ER staffing was not a viable alternative. In addition, given that physicians are a scarce and expensive resource, the plan needed to utilize the minimum number of physicians possible to deliver the required care.

Finally, the plan could not be designed in a manner that would exclude eligible beneficiaries from care. The hospital commander had previously determined that emergency medical services would be provided to all groups of eligible DOD beneficiaries who required this type of care. This did not mean that individuals who did not require care for medical reasons could not be deferred to a routine clinic which operated during normal duty hours. It did, however, require a plan that would deal, in some manner with the workload that presently existed.

Obstacles to Optimum Research

Ideally, exact diagnostic information for each patient seen, collected over an extended period of time, randomly sampled using appropriate statistical methods, would be the optimal data collection method. This would have required a prospective research plan that was beyond

why not retrospective ?

the scope of this study. However, enough other data were available to enable the workload estimates to be based on very reliable data. Therefore, while not optimum, the research data used is more than adequate.

In addition to diagnostic information, some measure of patient perceptions would have been desirable. A questionnaire is available to achieve valid measurement of the perceptions regarding Emergency Room treatment (Appendix C). Time and personnel constraints precluded administration of this questionnaire. Some indication was available by utilizing data from a questionnaire administered to the entire population by Fort Bragg, but, as will be discussed later, it was not designed in a manner to provide specific information required for this study. To optimally measure satisfaction levels and changes in these levels after reorganization, two administrations would be required: one under the current operating system and one after changes are made. Although this was not feasible for this study, it is desirable that this be accomplished to provide the organization meaningful feedback on the impact of changes made.

Other Factors to be Considered

Any proposed changes in the manner in which emergency medical services are being provided must recognize certain other constraints, in addition to those mentioned above. Foremost is the minimum requirement that the end result be in accordance with accepted standards for good medical care. Since Womack Army Hospital is accredited by the Joint Commission on Accreditation of Hospitals, the design must conform to JCAH standards (Appendix D. The standards to be effective January 1, 1979, have been used in this study). Another set of standards that must be complied with are the Ambulatory Patient Care Program Requirements of the U.S. Army Health Services Command (Appendix E).

In developing appropriate staffing mixes for the emergency room, only those health care providers currently available in the military system or local community have been considered. An example of this limitation is the Trauma Nurse Practitioners. Even though this skill could obviously be utilized, it is not pragmatically available at this time and has not been included in staffing alternatives.

Finally, it must be recognized that the problem of large emergency room workload is not a transient phenomenon. As will be discussed later, the ER is perceived as a valid source of care for all types of complaints, especially in evenings and weekends. The data also indicates the local eligible population is of such a nature that they will continue to seek care from Womack even if alternative facilities are available to them (Appendix F). They seem to be willing to pay the current time-distance price for receiving care. Complaints will increase or decrease and quality of care may change depending on the efficiencyof the emergency care system. However, there is no data to indicate the majority of patients who will seek other alternatives for care, regardless of the system's efficiency or inefficiency.

This trend is not local in nature or even restricted to military facilities. A review of the literature, which follows below, indicates the similarity of problems among many different facilities located throughout the nation.

Literature Review

Many years ago the emergency room was perceived as a place where only those patients requiring urgent

medical or surgical attention were seen and treated. Many social and medical factors have changed this role in recent times.

In gross numbers the increased workload has been dramatic. The American Hospital Association's statistical summaries show an increase of 308% in the emergency departments of non-federal community hospitals from 1954 to 1970. This translates to a rise from 28.7 million in 1965 to 42.7 million in 1970 and 71.9 million in 1976 (last year data has been summarized [illegible]). When all Federal and other types of health care institutions are added, the total emergency department visits for calendar year 1976 exceeded 76 million visits.[2]

Reasons most frequently mentioned for the upsurge in hospital emergency department utilization are:

A. A growing tendency for patients and physicians to view the hospital as a community health care center where it is appropriate to go for any form of care. An awareness that complex and costly equipment for diagnosis and treatment is more likely to be available in a hospital than in a physician's office. The convenience of using the emergency department because of its accessibility and constant availability.

B. Changing patterns of medical practice. These include a decrease in the number of physicians in general practice, lessened availability of doctors on evenings and weekends and for house calls, increased specialization that results in the patient not knowing which specialist to call, and undersupply of physicians in depressed areas.

C. Various external factors. One of these is third-party coverage for services rendered in emergency departments but not in physicians' offices. Another is the growing tendency for industries, schools, and police to refer patients to the emergency facility.

D. Population factors such as annual growth, rise in accident rates, greater prevalence of chronic disease, and substantial population mobility, coupled with the lack of a regular family physician.

Whatever the reasons for the prevailing situation, the problem is clear: hospitals presently are expected to serve unprecedented numbers of walk-in patients in their emergency departments.[3]

This rapidly changing delivery pattern has resulted in increased interest by a variety of medical and governmental organizations. This interest has resulted in a multiplicity of guides and standards being published.[4,5,6,7]

The current situation can best be described as one of change and experimentation. The attached bibliography, as extensive as it is, only represents a portion of the available literature regarding emergency medical services. As part of this process has come the recognition that the emergency department is treating many other types of problems other than acute medical/surgical/psychiatric conditions. One survey of 197 hospitals that analyzed 29,300 visits concluded that 42% of the visits could be categorized as non-emergency.[8] Studies conducted in Virginia estimate a high of 59% of ER visits are non-emergencies.[10] On the lower end of the spectrum is a Florida study that estimates a range of 25% to 30% non-emergencies.[11] Regardless of the estimate used, patterns have changed and the basic trends are clear for any researcher.[12]

Within the U.S. Army Health Services Command, the above workload distribution has also been recognized. Fitzsimons Army Medical Center, Letterman Army Medical Center, and the Fort Hood MEDDAC, just to name a few, have all reorganized to more efficiently handle the multiple conditions that present for treatment.

Triage, increased use of health care extenders and recognizing the place of emergency medicine as a specialty unto itself have been the primary responses both in the civilian and military health care system.

Emergency department personnel are confronted with an admixture of patients with conditions ranging from very minor to life-threatening, who need correspondingly different levels of emergency department resources. The problem becomes even more critical when the patient load exceeds the available resources of the department.

Triage, a concept originally applied to military situations where large numbers of casualties had to be handled quickly, has gained increasing acceptance in emergency departments as a method of assigning a patient to the most appropriate treatment area or health care resource. Four general patterns of triage can be commonly found:

1. A receptionist briefly interviews incoming patients and, by predefined criteria and experience, assigns each patient to an acute care area or a screening clinic.

2. A triage nurse conducts the triage interview and assigns the patient to one of several levels of care

within the emergency department or refers him to resources elsewhere. Though criteria for triage disposition may be used, the experience of the nurse plays an important part in this type of system.

3. Physicians are assigned as triage officers. They have wide latitude in the disposition of patients and among other options may evaluate, treat, and discharge the patient from the triage station.

4. Triage by staff evaluation of patient complaint as recorded on the patient's medical record.[13,14]

Use of physician extenders, e.g., Physician's Assistants, Nurse Practitioners, and in the military, enlisted medical specialists, has rapidly increased in the emergency department itself or as part of an ER/Acute Ambulatory Care System.

Nurse practitioners and physician's assistants have been categorized as mid-level health practitioners who perform tasks which traditionally have been within the purview of physicians. Most are taught to elicit a complete history and perform a routine physical examination on all types and ages of patients. Additionally, they can order diagnostic procedures, can interpret results and isolate abnormalities. They are also trained to carry out

specific medical regimens under physician direction and take necessary, immediate action to preserve life in emergency situations. Some are trained to perform minor surgical services. Generally, when they perform medical acts under physician supervision, the identified physician supervisor is legally responsible for their professional activity.

The first program to train physician's assistants was initiated at Duke University. Similarly, programs to train nurses for extended roles have proliferated. In 1976, there were approximately 7,000 NPs and 5,000 PAs who had completed training programs.[15]

The Army has defined the roles of these health care extenders as follows:

A. Nurse Practitioners.

1. Assess the physical and psychosocial health status of patients and/or their families through health and developmental history taking and physical examination.

2. Discriminate between normal and abnormal findings on the physical assessment and history taking.

3. Evaluate the assessment data in order to make prospective decisions regarding care and treatment in collaboration with physicians and other health team members.

4. Manage the care of selected patients within protocols mutually agreed upon by medical and nursing personnel including prescribing and providing care, initiating requests for laboratory and radiological tests, making judgments about the use of medications and treatments, and prescribing such medications and treatments based upon protocol, initiating referrals to other health team members.

5. Conduct nursing clinics for continuing care of selected patients.

6. Assume continuing responsibility for informing patients and families with implications of health status, treatment, prognosis through counseling, and health teaching.

7. Assess and interpret patient's needs to medical and/or nursing staffs and other members of the health team.

8. Coordinate inpatient/outpatient aspects of patient care.

9. Provide basic medical/nursing resource for the patient with acute minor illness or injury.

10. Collaborate and confer with other members of the health team or other disciplines.

11. Provide resource on nursing care and methods for beginning nurse practitioners and consultant for nurses on nursing problems presented by selected patients.

12. Maintain a high professional performance level through self-study, a meaningful experience, medical and nursing conferences, and any form of continuing education which keeps him/her abreast with current trends in his/her specialty area.

13. Provide direct patient care in those instances which demand expert professional nursing skills and judgment, and assistance to nursing staff in development of nursing care plans and management of patient care.[16]

B. Physician Assistant.

1. Collect and record in proper format medical social historical data appropriate to the patient's condition.

2. Perform a general physical examination and record the findings in proper format.

3. In cases of uncomplicated common illnesses and injuries, select the most likely diagnosis based on the findings.

4. Recognize those more complicated cases which require referral to a higher level of medical expertise for diagnosis and/or therapy.

5. Plan and initiate appropriate treatment within the capabilities of the facility to which he is assigned.

6. Identify those situations and individual cases which have public health significance and implement effective control measures.

7. Communicate to other health personnel orally or in writing in a clear, concise and well organized manner the findings, the diagnosis, and the planned treatment regimen.

8. The PA should be utilized for the delivery of primary, non-specialized medical care to all categories of patients.

9. In addition to conducting sick call in troop clinics and providing primary care in outpatient settings, the PA may be utilized in the management of common emergencies involving minor trauma or illness.

10. The PA may be authorized to perform specialized diagnostic and therapeutic procedures by the responsible supervising physician after appropriate

training and practical experience under the supervisor's guidance. This training and experience must be documented.[17]

C. Enlisted AMOSIST.

1. Review triage note to insure patient was appropriately referred to AMIC and redirects patient to other treatment areas if indicated.

2. Insure patients are aware of the non-physician status of an AMOSIST.

3. Take patients' history, performs selected parts of the physical examination, makes presumptive diagnosis, and order treatment in accordance with the AMOSIST Manual.

4. Record findings, presumptive diagnosis, and treatment on data collection sheet.

5. Order authorized drugs on appropriately pre-stamped prescription blank form.

6. Consult with AMOSIST physician or refer patient to AMOSIST physician as directed by the AMOSIST Manual or when doubt exists as to findings, diagnosis or treatment.

7. Prepares laboratory, x-rays or consult requests as directed by the AMOSIST Manual or the AMOSIST physician.

In review, the magnitude of the problem has been recognized, and personnel, other than physicians are becoming available to provide care in this setting. However, before appropriate staffing patterns can be evolved, the problem of productivity measurement must be addressed.

Any human activity uses up some form of resource when engaged in that activity. Even sleeping uses energy and materials from the environment. The more sophisticated and less concrete an activity becomes, the more difficult it becomes to measure the resources being consumed and the results of the consumption. Health care delivery is a complex system. Its output is difficult to measure and the system as a whole utilizes a myriad of inputs to produce its outputs.

With the increased emphasis on productivity, three basic questions remain: Can we call increases in total visits an increase in productivity? Which factors have had greatest contribution to increases? If quality of care is sacrificed to increase numeric output, is this productive?

In certain simple production processes, mathematical formulae can be relatively simply transformed into quantitative data that can then be manipulated conveniently.

This is not true in more complex industries and certainly becomes very difficult when dealing with a service industry such as health care. Richard M. Bailey lists several important factors which may differentiate the medical service production process from other industries. These are:

> . . . 1) Do we have a commonly accepted concept of the product? 2) Can we use dollar measures of output as a proxy for "real" production as we often do in other industries? 3) Do we really know much about the substitutability of factor inputs in the medical service production process? 4) Even if the potential for substitutability of factor inputs exists, can we explain the failure of physicians to avail themselves of opportunities to use lower cost inputs on grounds of scale alone? 5) What do we know of the effects that physicians can have on demand for certain outputs.[19]

This paper cannot address all these questions. However, they are worth remembering so as to avoid feeling that the creation of mathematical models is a solution. In fact it is just a tool to help conceptualize complex relationships and should not be viewed as an end unto itself.

A production function formula can give us a basis for examining health care production functions. Using

a model developed by Pauly and Redisch, this output can be perceived as being produced by physical capital (K), non-physician labor (L) and physician labor (M). Since military hospitals use physicians as members of the organization these three elements are representative of organizational inputs to production of outpatient services. Their model is expressed as:

$$Q = f(K, L, M).^{20}$$

This formula does not recognize that outpatient services constitute a range of many different services or outputs. An exact analysis would require the different outputs be specified. However, the Pauley and Redisch model can be used as the framework for analysis. Since the concern is with physician productivity, this model is advantageous because it identifies the input of physician labor (M). The output (Q) may be delineated further by defining it as those patient services that require direct time (labor input) of a physician. The nature of this physician input, the output, and how to measure it are key elements of the production process that need further examination.

Often the terms efficiency and productivity are used improperly. (Each, as seen above with productivity, has very specific economic definitions.) Uwe Reinhardt clearly defines the two types of efficiency commonly discussed in the literature. He describes technical efficiency as "the ability to obtain the maximum feasible rate of output from a given bundle of inputs." Economic efficiency is the least cost combination from alternative technically efficient combinations capable of producing at a given rate of output.[21]

Productivity is generally defined as the quantity of goods and/or services produced, divided by the quantity of resources employed in producing this quantity.[22] It is characterized as being: 1) applicable to a wide spectrum of economic activities, including health care; 2) measurable only with many compromises that may compromise the significance or validity of the numeric results and 3) often not measurable precisely in the manner dictated by the theoretical algebraic formulation because all the key input and output variables may not be quantifiable. As Berki has pointed out: "Many of the difficulties in analyzing productivity, or even

identifying it, arise from the lack of conceptual agreement on the appropriate definition of outputs and inputs."[23]

Physicians do not practice medicine in a void. They utilize space, even if it is under a tree, and in modern health care they use a variety of goods and services provided by others to assist them in their primary task. If they "work alone," others have contributed to the process by having educated the physician in the past. The production process formula used above ($Q = f(K, L, M)$) identified the physician as a key input. However, Q is a product of $f(K, L, M)$ and not $f(M)$. In other words, he is not a solo input. The productivity of this input will be dependent on the contribution of the other input factors. Theoretically, the changes in output from one factor can be isolated.

Given the production function, $Q = f(K, L, M)$, the output elasticity of M is the proportional change in output (however defined) resulting from a given proportional change in M, the input of K and L being held constant. The numeric quantity of this measurement can be found by dividing the marginal product of M by the average product of M.[24]

Measurement of productivity requires a definition of output. This is a key problem in attempting to measure productivity in a way that the health care professions and others who may use the data can agree upon. This entire paper could have been devoted to a review of the extensive, and varying, concepts of output of medical services literature that currently exists. These concepts range from purely quantitative to purely qualitative and deal with one factor or the entire system, over largely varying time periods.

The measure most commonly used, the average number of visits per a given unit of time, will provide a convenient starting point.

> The annual output in visits per provider is a reflection of the number of hours spent in clinical outpatient care, as well as the number of minutes spent per patient. . . . It is easy to find fault with the use of the number of visits per unit time as a measure of productivity. . . . However, at the present time the number of visits is the only measure of productivity that is available for the comparisons in outpatient areas.[25]

Recognizing that physician output is traditionally measured by what the physician produces, not its effects upon the patient, the view of J. May is worthy of note:

> It is important to observe that whether or not a particular definition is "correct" or not depends on the purpose for which it is used.
>
> The point here is not that any one of these definitions is "right" and others "wrong" nor that any small set of definitions is right to the exclusion of all alternatives (a careful reader can find dozens of definitions in the literature) the point is that they are fundamentally different and the differences are important to any consideration of the question of productivity.[26]

The impact of choice of output definition can be illustrated by an evaluation of the military system. The Report of the Military Health Care Study by DoD, HEW, and OMB clearly demonstrates that the services have not even been able to agree on the definition of what constitutes an outpatient visit.[27]

The Department of Army Staffing Guide for Medical Department Activities provides a starting point for on-site appraisal teams in determining number of physicians required. This method assumes certain productivity levels. These levels were established based on a survey conducted over twenty years ago. The current levels of staffing were ranked, and the 75th percentile was accepted as the norm or standard productivity per physician in each type of clinic setting. These

figures are basically still being used today, with the same emphasis on quantity. The Air Force in 1968 started using on-site industrial engineering teams to evaluate inputs, productivity standards, etc.

Unlike the Air Force method, the Army does not attempt to measure, in any uniform objective manner, the productivity of health providers or recognize the complexity of the output in an outpatient setting. In fact the current system gives proportionately greater rewards for admitting a patient instead of attempting to treat him as an outpatient. This has led the combined Health Care Study to recommend that resource allocation (to include health care providers) be done on the basis of capitation and utilizing cost per outpatient visit as a measure of efficiency.[28]

However, the alternatives mentioned above are not pragmatically available for use at this facility, especially without computer support. Therefore, the alternatives considered in this project are based on simple productivity concepts. Subjective modifications, instead of clearly defined quantitative data, have been used, out of necessity, when quantity outputs did not give a totally valid presentation.

One final issue must be addressed to ensure the completeness of this literature review. Finding methods of reducing demand is being increasingly discussed. These generally are focused on changing the health level of the population thru changing social/environmental conditions or changing use patterns. As Mehanic has stated:

> Another way of reducing demand for care is to modify patients' perceptions of its value or appropriateness.
>
> Changing expectations is an exercise in modifying the culture of medical care. This process requires changing perceptions of how particular health and illness incidents are to be handled.[29]

Obviously, this process is vast in scope and time required. Therefore, it has not been further explored for the purposes of this project.

Research Methodology

After having achieved an understanding of the current environment and researching the literature, an organized approach to solving the problem presented above was developed. This was completed in the following sequence:

1. Obtain thru direct observation, staff interviews and review of appropriate documents, an

understanding of how the current emergency medical service functions.

2. Obtain statistical information on the actual workload being performed. This data was compiled from official hospital records and from an emergency medical service survey conducted as part of a special study conducted by an Ambulatory Patient Care Committee sub-committee. This data will be discussed in more detail in a later portion of the study. Some information on waiting times was also obtained.

3. Obtain from other survey documents a measurement of patient perceptions regarding the emergency room.

4. Conduct an analysis of the workload data to allow for the development of an alternative to the current system.

5. Using experience from other facilities, staff interviews, Army standards, and literature reviewed.

6. Analyze the advantages and disadvantages of each alternative.

7. Arrive at conclusions and recommendations.

The following discussion will provide the results of the steps described above.

Footnotes

[1]N.C. Department of Administration, Division of State Budget and Management, North Carolina State Government Statistical Abstract, Third Edition, 1976, Table A.1; 1982 population projections by N.C. Department of Administration, Office of State Planning.

[2]American Hospital Association Annual Statistical Summaries.

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CHAPTER II

Discussion

Current Emergency Medical Service Systems

Using American Hospital Association criteria, Womack Army Hospital has been classified as a "Major Emergency Center," which is the equivalent of the Level II hospital emergency department classification of the Joint Commission on Accreditation of Hospitals (Appendix G). Level II is defined by JCAH as:

> A Level II emergency service offers emergency care 24 hours a day, with at least one physician experienced in emergency care on duty in the emergency care area, and specialty consultation available within 30 minutes by members of the medical staff or by senior-level residents. The hospital's scope of services shall include in-house capabilities for managing physical and related emotional problems, with provision for patient transfer to another facility when needed.

The physical layout of the emergency room is essentially the same as in the original hospital design (Appendix B).

There are four examining rooms, a TPR room, ECG area, major CPR/trauma room, three-bed holding area, and a four-bed minor treatment area. All care is

currently being provided in this space. The waiting area can accommodate approximately forty-three sitting persons at one time.

Description of Patient Flow (Figure 1):

(1) Patients check in at the desk and a clinical record sheet is stamped with their plastic identification card. Assessment of their complaint is determined by any available medical personnel, i.e., nurse, enlisted corpsman, or MD. If these are not available, then the secretary makes an assessment. Disposition is made at this time and the patient is sent for laboratory studies, to a Treatment Room, or to the Waiting Room. When appropriate, vital signs are obtained in the TPR Room. Acute problems requiring physicians/PA are brought to his attention and treatment, as indicated, is given. When patients return from Laboratory/X-ray, they check back in at the desk and wait in the waiting area. Depending upon the nature of their illness they may wait under closer observation in the holding area. Charts are accumulated in the Emergency Room A&D area, and patients are seen in Examining Rooms as availability of MDs/PAs permits. The physician sees the patient

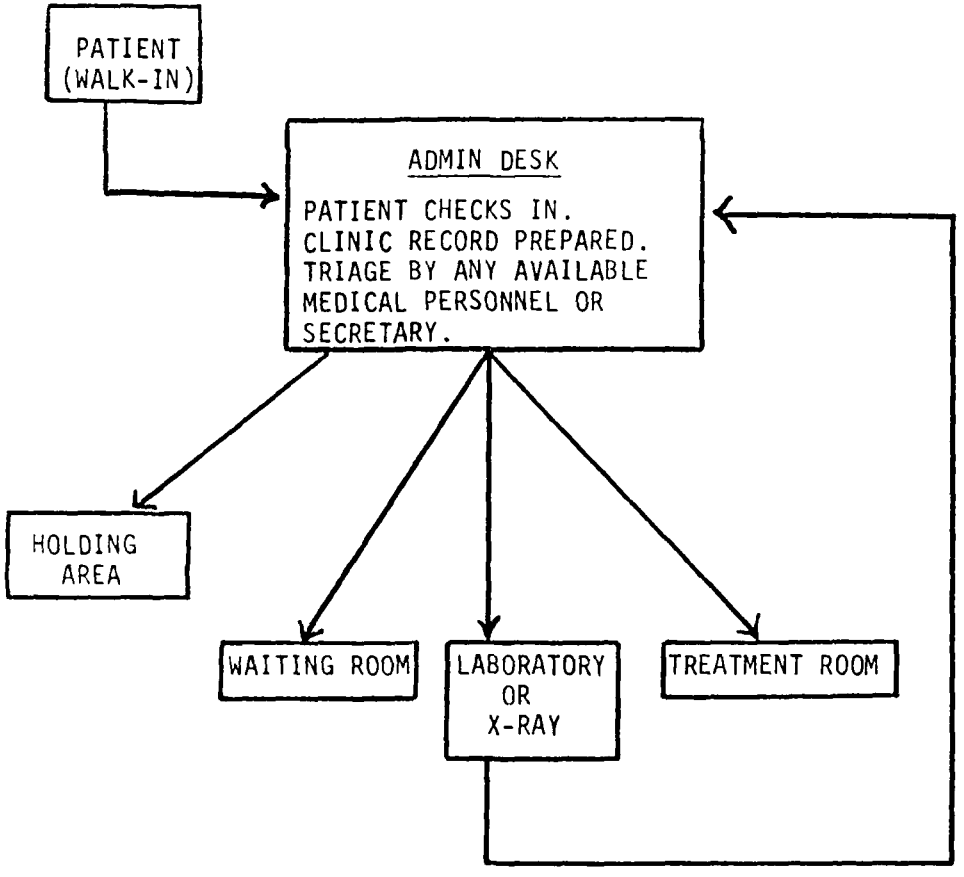
and disposition is made accordingly to the Laboratory/ X-ray, or to the Pharmacy which is located in the Emergency Room. The patient is then discharged, admitted, or asked to wait for a consultant. Patients who need to be seen by consultants wait in the holding area, Examining Room or Waiting Area and the chart is maintained at the A&D desk until such time as the consultant arrives. Subsequent follow-up of any patients can be directed to the specialty clinics or the TMC.

(2) Patients admitted through the Ambulance Section are seen either in the Trauma Room or in the holding area, depending on the nature of their illness, and they are then processed through laboratory and X-ray as indicated. If a physician needs consultation with a Specialty Service, the patient waits either in the Examining Room or in the waiting area until the consultant arrives.

(3) Patients arriving during duty hours at the Emergency Room, whose problem is deemed other than an emergency, are triaged to one of the following areas: back to the TMC if the patient is active duty, to the

AMOSIST triage desk for further triage, or to a specific specialty clinic as is appropriate. After regular duty hours, there is no triage as far as location of treatment. All patients are seen in the Emergency Room.

CURRENT PATIENT FLOW



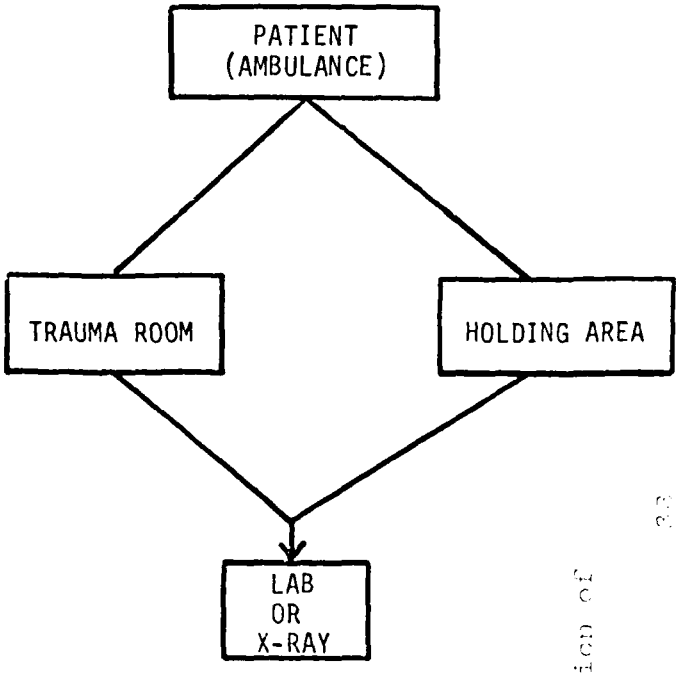


Fig. 1.--Description of patient flow

The current staffing pattern is varied, [illegible] the day of the week and shift. The first table below indicates required and authorized positions for the Emergency Medical Service based on the CY1977 Manpower Survey. (Due to administrative processing times for a survey these spaces have not yet been requisitioned against. However for purposes of this project they have been treated as currently valid). The tables that follow Table 1 indicate actual staffing patterns being used during [illegible].

[illegible]

[illegible]

Title	Required	Authorized*
General Medical Officer	6	1
ANC Officers	3	3
Civilian PT	4	4
Clinical Spec, E-7, 91C40	1	1
Clinical Spec, E-6, 91C30	4	4
Clinical Spec, E-5, 91C20	3	3
Clinical Spec, E-4, 91C10	2	2
Medical Spec E-4, 91B10	1	1
Medical Spec, E-3, 91B10	2	2
Medical Spec, other, 91B	2	2
Receptionist, civilian	3	1**
Total	31	24

*Authorized but not necessarily assigned.
**Does not include temporary hires.

TABLE 2

NORMAL WEEKDAY ER STAFFING - DAY SHIFT (0700-1500)

Title	Number on Duty
Physicians Assistant (0700-1630)	1
Registered Nurse	1
Clinical Spec 91C40	1
Clinical Spec 91C30	1
Med Specialist 91P40	1
Med Specialist 91P10	3

TABLE 3

NORMAL WEEKDAY ER STAFFING - EVENING SHIFT (1500-2300)

Title	Number on Duty
Supplemental Physician ER (SPER) (1630-2300)	1
Prof. Off. of the Day (POD) (1900-0730)	1
Physicians Asst (Dinner Relief 1630-1900)	1
Physicians Asst (1630-2300)	1
Registered Nurse	3
Clinical Spec, 91C30	1
Clinical Spec, 91C10	1
Med Spec, 91P10	3
Clin of Med Spec, other pers	2
Receptionist	1

TABLE 4

NORMAL WEEKDAY ER STAFFING NIGHT SHIFT (2300-0700)

Title	Number on Duty
POD (1630-0730)	1
Registered Nurse	1
Clinical Spec 91C20	1
Medical Spec 91B10	3

TABLE 5

NORMAL WEEKEND/HOLIDAY ER STAFFING DAY SHIFT (0700-2300)

Title	Number on Duty
POD (MC) (0730-1900)	1
SPER (MC) (0900-2300)	2
Physician Asst (1030-2300)	1
Registered Nurse	2
Clinical Spec 91C20	1
Med Spec 91B10	3
Receptionist	1

TABLE 6

NORMAL WEEKEND HOLIDAY ER STAFFING EVERY SHIFT (1500-2300)

Title	Number on Duty
POD (1900-0730)	1
SPER (0900-2300)	2
Physician Asst (1230-2300)	1
Registered Nurse	2
Clinical Spec, 91C30	1
Clinical Spec, 91C10	1
Med Spec, 91B10	3
Clin or Med Spec, other pers	2
Receptionist	1

TABLE 7

NORMAL WEEKEND/HOLIDAY ER STAFFING NIGHT SHIFT (2300-0700)

Title	Number on Duty
POD (1900-0730)	1
Registered Nurse	1
Clinical Spec, 91C20	1
Med Spec, 91B10	3

TABLE 8

AMBULANCE SERVICE EMT STAFFING

Shift	EMT on Duty (Weekday)	(Weekends)
Day	4	3
Evening	3	3
Night	2	2

The manpower for Professional Officer of The Day (POD), Supplemental Physician - ER (SPER) and evening/ weekend Physician Assistant are drawn, by roster, from personnel assigned to Womack Army Hospital, XVIII Airborne Corps units and Pope AFB.

Following the staffing patterns analysis presented above, it was then necessary to obtain workload information in the categories listed below:

1. Number of patients, by shift, weekdays.
2. Number of patients, by shift, weekends/holidays
3. Number of patients, by day and shift, that are:
   a. Acute minor illness.
   b. Pediatric.
   c. All other.
4. Sample waiting times data.

Data was obtained utilizing a variety of techniques and time periods. Whenever possible, multiple inputs were used in an attempt to compensate for possible seasonal or other variations. Sample sizes were all of sufficient size to meet standard tests of statistical validity (Appendix H presents data in graphical form).

An Emergency Medical Service study committee evolved a survey instrument which was administered during the period 5-16 December 1977 (Appendix I).

The conduct of the study was as follows: Emergency room data collection form was attached to each clinic record sheet. The upper portion of the form was filled out by the administrative personnel in the Emergency Room, and the lower portion was filled out by the physician. During peak load shifts, that is, evening weekdays, evening weekends, and day weekends, additional administrative personnel were available to insure that the form was filled out completely. The form was then separated from the regular Emergency Room clinical record and placed in a separate box. Tabulation was performed item by item.

TABLE 9

TOTAL NUMBER OF SURVEY DOCUMENTS COLLECTED

	Weekdays	
Day (0700-1500)	=	254
Evening (1500-2300)	=	730
Night (2300-0700)	=	120
		1104
	Weekend	
Day (0700-1500)	=	126
Evening (1500-2300)	=	190
Night (2300-0700)	=	22
		338
Grand Total	=	1442

All questions were not completed on all documents. Therefore summary data may not equal total number administered in each category.

TABLE 10

TWO WEEK SURVEY RESULTS
PEDIATRIC/AMIC PROFILE

(only those questions which were felt to have significant information are included in this report. The data is keyed to question numbers.)

Question #2 - Patients under 14 years of age.

Overall----------25.6%
Low----------20.2% weekend evenings
High----------94.1% weekend nights

(n = 359)

Question #7 - Patients were asked if they would have gone

to an acute minor illness clinic if available.

(Figures are positive responses.)

Overall----------79.6%
Low----------17.4% weekday days
High----------94.1% weekend evenings

(n = 870)

TABLE 11

CATEGORY OF SEVERITY OF PROBLEM

Question #14 - After seeing the patient, the treating physician was asked to make an assessment of the medical problem.

1 equivalent to acute emergency

9 equivalent to convenience visit

	1-3	4-7	8-9
Overall	34.3%	49.0%	16.7%
High	40.2% weekend evenings	73.0% weekend evening	27.5% weekday day
Low	25.5% weekday day	42.5% weekend evening	1.7% weekday day

n 1-3 = 452

n 4-7 = 646 n = 1,318

n 8-9 = 220

Question #16 - Treating physicians were asked to give an opinion regarding lowest level of practitioner who could have treated the patient. Figures are for all other providers other than physicians.

Overall	85.2%
Weekday evenings	86.6%
Weekend Day and Evenings	87.4%

n = 1314

TABLE 12

EXTRAPOLATED AVERAGE WORKLOADS USING TWO WEEK SURVEY DATA

Weekday evening shift:

Average	116 patients
Pediatrics	32 patients
Emergencies (i.e., Category 1-3)	43 patients
Non-emergency (i.e., Category 4-9)	73 patients
Non-physician care possible	41 patients

Weekend days:

Average	108 patients
Pediatrics	32 patients
Emergencies (i.e., Category 1-3)	27 patients
Non-emergency (i.e., Category 4-9)	81 patients
Non-physician care possible	49 patients

Weekend evenings:

Average	108 patients
Pediatrics	22 patients
Emergencies (i.e., Category 1-3)	43 patients
Non-emergency (i.e., Category 4-9)	65 patients
Non-physician care possible	43 patients

Of those patients seen in the ER 17.5% or nearly 1 in 5 had to be seen twice. That is, the doctor saw the patient and had to re-see the patient again after the lab visit.

The next data source examined was the emergency room log. This is the actual record maintained in the ER in which each patients name, status, complaint and similar information is recorded when the patient checks in. A two week sample period (December 5 thru 16, 1977) was taken as a cross check against the survey taken. For this period n = 2,371.

A four week sample was then taken as a cross check against seasonal variation. The following table reflects this sample period and size:

TABLE 13

FOUR WEEK SAMPLE SIZE (1977)*

Period	Weekday	Weekend	Total
Nov 28 - Dec 3	887	495	1382
Sep 19 - Sep 25	953	591	1544
Jan 17 - Jan 22	585	585	1467
Apr 25 - Apr 30	1016	556	1572
TOTAL	3,738	2,227	5,965

*Total visits for 1977 were 77,385.

This data was then used to determine the percentage of patients that fall into one of three categories, i.e., pediatrics, acute minor illness and all others.

TABLE 14

TWO AND FOUR WEEK ER LOG SAMPLE RESULTS

Weekday Evening (1500-2300) Shift*

Survey	AMI	Pediatric	Other
Two week	43%	33%	24%
Four week	42%	34%	24%

*Average visits = 129 per shift

Weekend Day (0700 - 1500) shift*

Survey	AMI	Pediatric	Other
Two week	51%	34%	15%
Four week	52%	30%	18%

*Average visits = 120 per shift

Weekend Evening (1500 - 2300) shift*

Survey	AMI	Pediatric	Other
Two week	50%	29%	21%
Four week	47%	28%	25%

*Average visits = 123 per shift.

The average percentage distribution utilizing all sampling data was then computed per evening and weekend shifts. This average percentage estimate was later used to obtain overall configurations.

TABLE 15

AVERAGE PERCENTAGE BY CONDITION

ALL SAMPLE DATA

Category	Weekday Evening	Weekend Day	Weekend Evening
AMI	38%	52%	43%
Pediatric	36%	32%	32%
Other	26%	16%	25%

In order to estimate workload distribution by shift over an extended period of time the actual workload, by shift, was examined for the months of December, February and July 1977. (Appendix I). For this data set n = 19,453. The results, by percentage, are:

TABLE 16

WORKLOAD DISTRIBUTION BY SHIFT
THREE MONTH SAMPLE

	Weekday	Weekend
Day (0700 - 1500)----------	21%	43%
Evening (1500 - 2300)----------	59%	42%
Night (2300 - 0700)----------	20%	15%

These percentages were then compared to those derived from the other sample groups and the following average shift distributions were computed:

TABLE 17

AVERAGE SHIFT DISTRIBUTION
ALL 1977 SAMPLE DATA

	Weekday	Weekend
Day (0700 - 1500)----------	21.7%	42.9%
Evening (1500 - 2300) ----------	61.6%	46.1%
Night (2300 - 0700)----------	16.7%	11.0%

Utilizing the actual workload, reported on official hospital reports for the period 1974 thru 1977 and the distribution percentages computed above, the following table was generated.

TABLE 18

AVERAGE DAILY EMERGENCY SERVICE WORKLOAD 1974-1977

1974 (n=75,619; Average/month = 6,302)

	Day	Evening	Night
Weekday	39	111	30
Weekend	120	130	31

1974 Average Patient Distribution

Category	Weekday Evening	Weekend Day	Weekend Evening
AMI	42	62	56
Pediatrics	40	38	42
Other	29.	20	32

1975 (n=77,871; average/month = 6,489)

	Day	Evening	Night
Weekday	42	118	32
Weekend	130	140	34

1975 Average Patient Distribution

Category	Weekday Evening	Weekend Day	Weekend Evening
AMI	43	65	58
Pediatrics	41	40	43
Other	30	20	33

1976 (n = 80,925; average/month = 6,744)

	Day	Evening	Night
Weekday	42	118	32
Weekend	130	140	34

1976 Average Patient Distribution

Category	Weekday Evening	Weekend Day	Weekend Evening
AMI	44	67	60
Pediatrics	43	42	45
Other	31	21	35

1977 (n = 77,385; average/month = 6,449)

	Day	Evening	Night
Weekday	40	113	31
Weekend	124	134	32

1977 Average Patient Distribution

Category	Weekday Evening	Weekend Day	Weekend Evening
AMI	42	64	58
Pediatrics	41	40	43
Other	30	20	33

Average Workload - All Data

	Day	Evening	Night
Weekday	40	114	31
Weekend	125	135	32

Average Patient Distribution - All Data

Category	Weekday Evening	Weekend Day	Weekend Evening
AMI	43	65	58
Pediatrics	41	40	44
Other	30	20	33

Another data set that was of interest was average waiting and service times. Due to the difficulty of accumulating this type data the survey period of 5 thru 16 December 1977 (n = 955) was used exclusively.

TABLE 19

AVERAGE WAITING AND SERVICE TIMES IN MINUTES

Type of Time	Day	Evening	Night
(Weekdays)			
1. Waiting Time	30	74	90
2. Service Time	28	36	15
3. Total ER Time	58	110	105
(Weekends)			
1. Waiting Time	95	71	80
2. Service Time	17	13	17
3. Total ER Time	112	84	97

The large amount of statistics presented above was essential to provide an objective base upon which alternative plans, if appropriate, could be developed. However, community perception of service provided is also an important factor.

Community Perception of Emergency Medical Services

An installation-wide program "to improve the quality of life for the soldier and his family" has been initiated at Fort Bragg. One aspect of this community life program was the conducting of a survey, by questionnaire, "to determine how dependents, living on post, view the quality of community life at Fort Bragg."

Six thousand (6,000) questionnaires were mailed to the homes of active duty personnel assigned to the Fort Bragg installation in November of 1977. Of these, 1,048 questionnaires were returned. This is a response rate of 17.5%. The community "Quality of Life" survey project was implemented by the Organizational Effectiveness Branch, Human Effectiveness Division, ACofS, G1/DPCA. The procedure for implementation was conducted in four phases:

(1) The design of a comprehensive quality of life survey based upon postwide surveys developed at Fort Ord, CA, and used at other Army installations (including Fort Campbell, KY).

(2) The selection of a sample population to survey. A list of military sponsors whose social security number ended in the digits 7, 8, and 9 was obtained from the three post Personnel and Pay Service Divisions' SIDPERS data base.

(3) The distribution of the surveys was implemented by mail and direct delivery to major subordinate commands. The survey packet was individually addressed to each selected military sponsor and included survey questionnaire booklet, a separate answer sheet, return envelope, and a letter explaining the purpose of the survey.

The Quality of Life survey contained 19 "demographic" items (questions 1-19) which provide a description of the sample population that responded to the survey. Also, the survey contained 132 items (questions 20-152) which were weighted on a 5-point scale ranging from being "completely dissatisfied with"

(scale value = 1) to being "completely satisfied with" (scale value = 5). The 132 items were designed to provide information about seven "Quality of Life" indices: post environment, off-post environment, post services, medical care, husband's job, family life, and career.

In response to the question that requested a satisfaction rating with regard to "the treatment received in the hospital emergency room", the replies by percentages were:

completely satisfied	=	8.36%
mostly satisfied	=	18.33%
neutral	=	41.20%
mostly dissatisfied	=	16.42%
completely dissatisfied	=	15.69%
Total	=	100%

Using standard statistical evaluation techniques, the sample size was numerically sufficient to meet tests for validity at the 95% confidence level. Also, the sampling method used to distribute the questionnaires was proper. However, one element may have effected the representativeness of the study. Returning the survey was optional. The respondent may have been

biased (positively or negatively) and this provided the impetus to return the survey, thus reducing the value of the measuring instrument. However, the data from the survey is currently the best available for the total population and should not be ignored because of this potential problem.

Another, although less accurate, indicator is number of complaints received in the hospital patient relations office. During calendar year 1977, a total of 59 complaints about the emergency room was received. This represents 6.5% of all complaints received.

These two measures would indicate that, while certainly not completely satisfied, the general perception is not overwhelmingly unfavorable. However, a more accurate survey of patient perceptions, utilizing a more specifically designed survey instrument (Appendix C), is required to gain a better measure of community perceptions.

Advantages of Current System

1. The weekday system is working well; the "true emergency" is treated in the emergency room.

while the non-emergent is triaged and treated in the acute minor illness clinic or a specialty clinic.

2. The evening, night and weekend ER is, in fact, caring for all patients that present themselves for treatment.

3. A minimum amount of scarce personnel resources are being utilized.

4. The average waiting times of 74 to 95 minutes, during non-duty periods, tends to discourage use of the emergency room during these hours.

5. Lack of triage and specialty care also tends to discourage use.

6. Patients do not perceive the emergency room as a "convenience clinic" but come because of lack of alternatives. (This includes long waits or no appointments during duty hours).

Disadvantages of Current System

1. During non-duty hours, the true emergent patient is still cared for, but the acute minor illness has to wait an extended period of time. Also, patients who have an acute medical or surgical problems must wait longer during non-duty hours than duty hours because of the number of acute minor illnesses.

2. Many physicians feel uncomfortable treating the pediatric population that arrives in the evening.

3. There is no effective triage currently employed in the emergency room. The current system is done by a variety of people, depending upon interest, availability, amount of waiting time, and the time of day. Triage may be accomplished by the physician or the ward secretary, or any of the people in between. Patients may be improperly triaged.

4. Waiting times are believed by many staff and patients interviewed to be too long.

5. The current staffing of the Emergency Room evenings, nights, and weekends involves a rotating roster of physicians. This results in the potential for a variable level of patient care, depending upon the diversity and interest of the medical specialists involved.

6. There is an inadequate number of examining rooms for the number of patients and providers.

7. There is mismatch between the skill level required for many patients and the provider's actual skill levels.

8. As specialists become more scarce, additional pressures may be placed on the emergency room which it cannot absorb.

9. The quality of care, albeit difficult to measure, is not at as high a level as it could be.

Designing An Alternative

Chapter one contained an extensive literature review and will not be repeated here. The design of an alternative system used the Brooke Army Medical system as a starting point. Health Services Command Ambulatory Patient Care models were also used as well as Army staffing guides. All of these were modified to ensure the alternative was designed to meet local needs. A brief description of the Brooke Army Medical Center system and other inputs is given for fuller understanding of the final design.

The Brooke Army Medical Center Triage Section is located near the entrance of the Emergency Services Section. An incoming ambulatory patient receives his outpatient records at the records room and is directed to the Triage Station where he is interviewed, usually within 5 to 10 minutes.

The Triage Section is staffed by basic medical corpsmen. On the basis of the answers to questions from the triage algorithms, several dispositions are possible from the Triage Section.

1. A medical emergency room where potentially serious medical complaints are treated.

2. A surgical emergency room where trauma cases are evaluated and treated.

3. An acute minor illness clinic where less serious cases are treated. The AMOSIST in this area are directly supervised by a physician. This system operates 24 hours a day, seven days a week.

According to APC Model #13 one enlisted AMOSIST can treat approximately twenty patients in an eight-hour shift. Although experience during 1977 at this facility has indicated that the figure may range, on the average from 12 to 16, this lower figure was not used. Several space and staffing problems, e. g., one physician supervising over ten AMOSISTs plus treating patients, have contributed to this figure. Therefore, the HSC figure has been used as an acceptable national standard.

Extensive interviewing resulted in a pragmatic estimate of one patient every ten minutes for pediatrics and minor illness for adults. The physician's assistants who were interviewed estimated they could triage over twelve patients an hour.

Physician Assistants are proposed for triage because of availability, ability to order required lab and x-ray tests, speed, and ability to determine which patients could wait for treatment an extended period of time.

Proposed Alternative System

Patient flow (figure 2) will be:

1. Patients will check in at the reception desk and have vital signs taken in TPR room, then take a seat in the waiting room.

2. A physician's assistant will see the patient in a triage room.

3. The PA will assess the nature of the problem and triage the patient to one of the following categories:

(a) Major medical--The patient, adult or pediatric, needs to be evaluated and treated right away, usually in the main ER.

(b) Non-acute pediatrics--The patient has a problem which can wait a reasonable length of time; lab and/or x-ray is ordered and/or old chart is obtained and the patient waits to be called by the pediatrician and seen in the clinic area (E wing next to the ER).

(c) Non-acute adult--The patient has a problem which can wait a reasonable length of time; lab and/or x-ray is ordered and/or old chart is obtained and the patient waits to be seen in E wing by the SPER.

(d) Acute minor illnesses--These patients will be triaged after lab or x-ray to the AMOSIST working in E wing. The AMOSIST will be supervised by the SPER.

(e) Convenience visits--The Triage Officer will have the authority to encourage selected patients to leave without definitive care and seek a routine appointment in weekday daytime facilities.

PROPOSED PATIENT FLOW

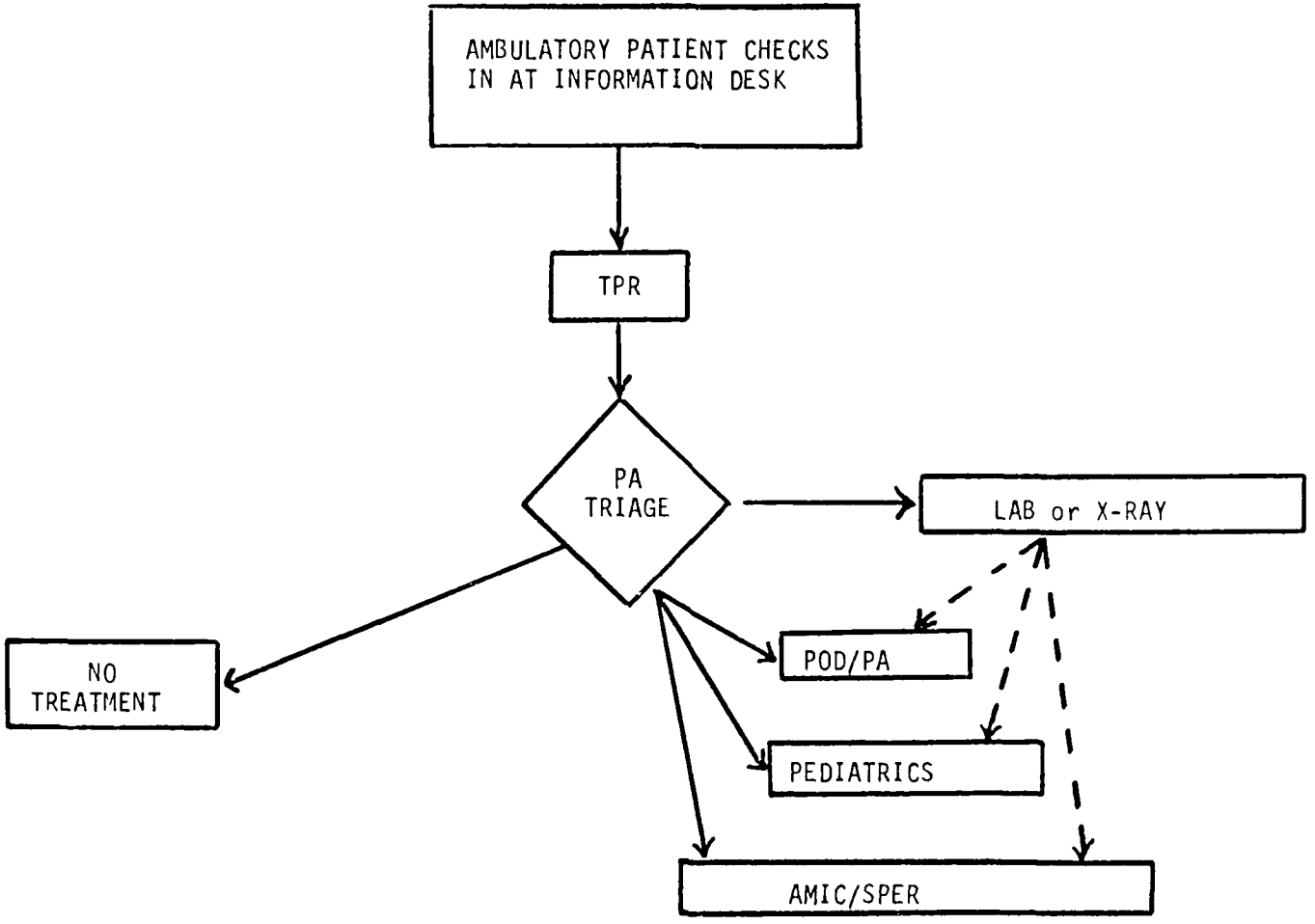


FIGURE 2

The following staffing configurations are required for this proposed system to be effective. Personnel strengths are based on average workloads computed in Table 18.

TABLE 20

PROPOSED STAFFING PATTERNS*

Weekday - Day Shift (0700-1500)

No change from Table 2.

Weekday - Evening Shift (1500-2300)

PCD (1900-0730)	1
SPER (1630-2330)	1
Pediatrician (1630-2330)	1
PA-Triage (1630-2300)	1
PA-Treatment (1630-2300)	1
AMOSIST (91B20V1) (1630-2330)	2
Registered Nurse	2
Clinical Specialist	2
Med Specialist	6
Receptionist	1

Weekday - Night Shift (2300-0700)

No change from Table 4.

Weekend/Holiday Day Shift (0700-1500)

POD (0730-1900)	1
SPER (0900-2300)**	1
SPER-AMIC (1000-2330)	1
Pediatrician (1000-2330)	1
Physician's Assistant-Triage (0930-2300)	1
AMOSIST (1000-2330)	3
Registered Nurse	2
Clinical Specialist	2
Medical Specialist	6
Receptionist	1

**Second SPER will be required to handle pediatric and AMIC backlog.

Weekend/Holiday Evening Shift (1500-2300)

POD (1900-0730)	1
SPER (0900-2300)**	1
SPER-AMIC (1000-2330)	1
Pediatrician (1000-2330)	1
PA-Triage (0930-2300)	1
AMOSIST (1000-2330)	3
Registered Nurse	2
Clinical Specialist	2
Medical Specialist	6
Receptionist	1

**Second SPER will be required to handle pediatric and AMIC backlog.

Weekend/Holiday Night Shift (2300-0700)

No change from Table 7.

*Civilian contract physicians are interchangeable for all physician positions listed above.

Disadvantages of Proposed Alternative

1. Additional space outside the emergency room area will be required. However, there is more than adequate waiting and examining room space available in the AMIC (E wing) Clinic which is immediately adjacent to the ER area.

2. Additional personnel resources must be committed to make this proposal viable. Even though there is an overall physician shortage predicted for the coming year this facility will gain in pediatricians assigned. The hospital commander has indicated his willingness to allocate this resource as proposed. Similarly, the XVIII Airborne Corps units, especially the 82d Airborne Division will have an increased number of physician's assistants. The Division Surgeon has stated that the additional four hours of coverage on weekday evenings can be provided by division PA's who are currently working until 1900 hrs. SPER and POD hours are not increased by this proposal. However, reduction in impact of ER duty or assigned staff will only be possible thru utilization of civilian contract physicians. An increase of 5 AMOSISTs and 15 medical specialists will be required to support this operational

concept. Unless resources can be obtained from within the MEDDAC at Fort Bragg the chances of implementation are slim. Given current Health Service Command strength limitations and workload reductions, additional requirements and authorizations would probably not be forthcoming.

3. The presence of additional providers, coupled with effective triage, may change the community perceptions. This could result in increased use to the point where all providers are again overloaded with diminished quality and increased waiting time the net result. There are two possible avoidance mechanisms for this phenomenon. This new system must not be advertised to the general public. The concept of a "new evening clinic" must be avoided. Secondly, the triage PA must be supported in his attempts to divert patients who do not require care. This diversion can be in the form of referal to regular duty day clinics or placing the patient in a long wait-low priority status.

Advantages of Proposed Alternative System

1. Waiting times would be significantly reduced.

2. Bulk of the pediatric case load would be treated by a pediatrician.

3. There would be an effective, regularized triage system.

4. There would be a better match between skill level of the provider and medical needs of the patient.

5. Waiting and treatment areas would be less crowded.

6. Emergency room duty would be less onerous for assigned and rotating personnel.

7. There would be in increased ability to absorb additional workload.

8. The "quality of care" when viewed as a function of advantages one through seven about would improve.

It is not, however, sufficient to compare the number of advantages to disadvantages in deciding upon a course of action. These must be weighted depending upon their individual impact. This will be further explored in the concluding chapter.

CHAPTER III

CONCLUSION

As reviewed in detail in the preceding chapter, the current emergency medical system is not functioning well during three critical periods. These are weekday eveings, weekend/holiday day shift, and weekend/holiday evening shift. The workloads for these shifts is 114 patients, 125 patients, and 135 patients, respectively. Approximately 38% to 52% of this workload can be classified as acute minor illness with 32% to 36% pediatric patients. Waiting times during these shifts ranges from one hour and eleven minutes to one hour and 35 minutes.

It can be concluded that the current emergency medical service system at Womack Army Hospital does require improvement. Implementation of the proposed alternative system would resolve the problem areas identified.

However, this implementation will require a reallocation of resources, possibly to the detriment of some other area. While some minor modification of proposed staffing patterns can be made, e.g., one SPER

instead of two on weekends, the essential elements of triage, pediatric, and AMOSIST care must be retained if the proposal is to be effective.

A working group composed of nursing service, force development, personnel, and ambulatory care administration should be formed to identify possible available resources. Possible examples (not firm recommendations) would be the reallocating of spaces from inpatient wards and ambulance service. This group should present its recommendation through the Executive Officer to the Hospital Commander for decision.

Efforts should be intensified to obtain contract physicians for the emergency room to reduce the impact of this duty on amount of specialty care available.

Specific criteria for triage and patient flow management will have to be developed by a multi-disciplinary group.

We can no longer afford to treat the reorganization of the hospital's emergency medical service as the queen in "Alice's Adventures in Wonderland" treats jam.

"The rule is jam tomorrow, and jam yesterday--but never jam today."

"It must come sometimes to 'jam today,'" Alice objected.

"No, it can't," said the Queen. "It's jam every other day: today isn't any other day, you know."

APPENDIX A

LETTERS REGARDING PHYSICIAN SHORTAGES

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

HSPA

22 [illegible] 1979

Colonel Llewellyn J. Legters
Commander
US Army Medical Department Activity
Fort Bragg, NC 28307

Dear Colonel Legters:

The continuing military physician shortage is the most significant problem now facing the AMEDD. This shortage affects literally every Army MTF. It is essential, therefore, that commanders receive the earliest possible notification of FY 78-79 physician staffing projections. This information will allow early planning at the local levels for quality medical services within existing constraints. Accordingly, policy guidance from The Surgeon General (Incl 1) and the specific projections of the HQDA Medical Corps Specialty Distribution Conference as they pertain to your activity (Incl 2) are attached to this letter. Please note that these staffing projections are stated on a "worst case" basis and make no allowance for additional physicians who may become available through recruitment. It is vital that commanders and their staffs not interpret and convey the inclosed figures with a sense of despair.

I especially would like to emphasize General Pixley's remarks concerning the issuance of impact response statements to the military health care beneficiary population. It is the objective of this command to provide authorized health care support to all beneficiary categories as soon as possible. In particular, we must acknowledge the moral commitment we have to retired military personnel and their dependents. Federal statutes notwithstanding, I decry the statement that retired families have "last priority." Let us assert that we must care for the active duty soldier first, his family next, and that we will do all within our resources to provide the maximum amount of care possible to the retiree population. In addressing the retired population, we must translate the semantics of altruism into a genuine expression of concern and helpfulness. Retirees have spent a career on active duty, are not strangers to temporary constraints, and generally are very cooperative. When referring to restricted services, the key word must be temporary.

22 FEB 1978

HSPA
Colonel Llewellyn J. Legters

It is obvious from the inclosed staffing projections that the number of Medical Corps officers you will have assigned is less than required. You have been selected as a commander because of your ability to meet challenges, lead your personnel and maintain a positive attitude. Our physicians, military and civilian, and the health professionals who are assisting them will be working very hard. Please stress to your administrative and ancillary support personnel (officer, enlisted and civilian) that their first and second priorities must be support of the health professional.

General Pixley and I are convinced that the overall Medical Corps staffing posture can be improved through vigorous recruitment and retention efforts. This requires that all HSC commanders be personally involved with the AMEDD's need for additional physicians, both through recruitment of new physicians, and retention of those who might otherwise be leaving the service. We are confident that your strong support will enhance the success of these programs.

We must keep in mind that the ultimate objective of the Medical Department is to be a ready force in support of the nation in time of war or national emergency. We maintain our professional capabilities in peacetime by providing health care to the military community. That objective is the reason that quick fixes are not the answer. Anything that we do now which provides the eventual attainment of a well trained, career oriented and fully manned medical service for the future deserves our support; actions which look good now but do not support that objective must be viewed with extreme caution.

I intend that the staffs of our medical centers assist the MEDDAC to the maximum extent possible. The extension of the efforts and competence of the MEDCEN attending and house staffs into the MEDDAC arena has obvious advantages to both. It is not substituting service for teaching. It is expanding the teaching arena into new places and situations which will improve the basic knowledge of the trainee beyond individual clinical problems and into the means of health care delivery and nature of the Army. I consider the latter essential, but often neglected, facets of our graduate medical education system.

In the next two weeks, it is imperative that you and your staffs assess the impact of next summer's staffing on your mission capability, taking into account local civilian and other military resources and medical center referral capabilities and provide us with a plan of action. I suggest that you involve all levels of personnel in your command in the assessment process, so as to insure a collective effort toward a comprehensive plan of action. As stated, I am tasking each MEDCEN commander with the mission

22 FEB 1979

HSPA
Colonel Llewellyn J. Legters

of providing expanded support to those MEDDAC within his health services region. Accordingly, you should coordinate responses with your supporting MEDCEN. I would appreciate receiving your analysis of the impact that the inclosed figures will have on your activity within two weeks of your receipt of this letter. Please submit this information to this headquarters, ATTN: HSPA, in the format prescribed by Incl 3.

We are faced with one of the most difficult periods in the history of the AMEDD. The staff at HQ HSC and I will do everything possible to obtain and provide you with personnel, financial, and material resources necessary to accomplish your mission. We will also support The Surgeon General in his worldwide responsibility and in his efforts to enlist and maintain the support of the DA and DOD staffs, the Congress and the public. I commend you for your exemplary efforts to date and assure you that you have my complete support in the months ahead.

Sincerely,

Marshall E McCabe

3 Incl
as

MARSHALL E. McCABE, M.D.
Major General, MC
Commanding

DEPARTMENT OF THE ARMY
OFFICE OF THE SURGEON GENERAL
WASHINGTON, D.C. 20310

REPLY TO ATTENTION OF:
DASG-ZA

15 February 1978

MG Marshall E. McCabe, MC
Commander
US Army Health Services Command
Fort Sam Houston, Texas 78234

Dear General McCabe:

The Army continues to experience a significant physician shortage. The recent Medical Corps Specialty Distribution Conference (attended by your staff) analyzed on an individual facility basis projected specialty shortages for FY 78-79.

It is important for you and your commanders to have early notification of anticipated MC projections. The attached documents represent the projected "worst cases." I do not believe the worst case will be experienced because we are expecting a significant number of volunteers through the summer months. You will note the newest hurt will be OB-GYN and orthopedic surgery coverage for some installations.

It is imperative that a sense of panic not set in at any level as a result of review of these figures. Further, I expect each MTF commander to use mature judgment and discretion as to how, when, and to whom and what portions of the information be transmitted to installation commanders and the civilian military community.

It is especially important that MTF staffs avoid statements which include negative words such as "deny" and "curtailment" of medical care for any category of Department of Defense beneficiaries. Rather, orchestration of information dissemination must use simple and logical explanations which convey a clear message that specialty service coverage may be either temporarily unavailable or restricted except for active duty and, where possible, their dependents.

Explanations and pronouncements must convey positive emphasis that health care support for all categories will be achieved as soon as possible.

DASG-ZA
MG Marshall E. McCabe, MC

Individuals who in the course of their daily activities are assigned the responsibility to communicate with patients and sponsors must be both knowledgeable and understanding of patient problems and possible solutions. Maximum effort must be devoted to provide information on their options as well as detailed assistance for sponsors who utilize CHAMPUS.

I consider the retired military community a particularly sensitive group. Based on recent field visits, I am convinced some (not all) MTF commanders could improve resource management (professional staff utilization) to expand services for the retired military community. We must leave no stone unturned to provide whatever health services are feasible within resource constraints for this important group. As a minimum, the retiree community must perceive that the Army Medical Department really cares and is concerned.

I am convinced our Medical Corps personnel staffing posture can improve through more vigorous retention and recruiting efforts. Your commanders should be strongly encouraged to increase their personal involvement. MEDDAC recruitment efforts must be directed not only for themselves but also for the entire Army Medical Department. We need more physicians everywhere but especially at the MEDDAC's. Remember, for volunteer accessions, in selected specialties, I am quite willing to entertain a written guarantee of stabilization at a station of choice.

The inclosed "first iteration worst case" information should assist HQ HSC and your commanders to assess staffing projection impacts and determine what can be accomplished within total resource availability. Health care delivery services at each facility must be reviewed, altered and tailored to efficiently utilize all available professional skills. This is not an easy task. Parochialism and traditional health care delivery modes must be appropriately challenged in search of maximizing responsive and comprehensive care.

I have a keen interest in current programs to expand exported MEDCEN support of MEDDAC's. Progress to date at BAMC is very impressive. I believe more can be accomplished by all MEDCEN's. Above all, this thrust must not be construed as degraded training by interns and residents. Properly programmed and planned, the quality of training opportunities for selected specialties should be enhanced and enriched. Successful expansion is contingent on close interface, tolerance, mutual respect and understanding by both MEDDAC and MEDCEN staffs. In addition, we must be prepared to support more TDY visits (using military aircraft to the maximum) of MEDCEN selected specialty staff visits to MEDDAC's. Consultant visits should focus primarily on holding specialty clinics for accumulated problem cases which require expert opinion for resolution. I am confident your strong support will enhance success for these programs to partially alleviate some critical specialty shortages at selected MEDDAC's—especially during the summer months. The potential is great and successful innovations limited only by imagination, an open mind and strong resolution. Each MEDCEN commander and his staff must develop an

DASG-ZA
MG Marshall E. McCabe, MC

active concern and aggressive interest in MEDDAC health services within the catchment referral area.

Within the next three weeks, I would appreciate feedback on the "worst case" MEDDAC staffing. Please feel free to quote the contents of this letter as you transmit specific information to your commanders or transmit the letter as written.

Finally, I am convinced that the future of the AMEDD will be stronger as a result of experiences and challenges during this difficult period. I appreciate your continued support and remain ready to assist in every way possible.

Warmest regards,

Sincerely,

CHARLES C. PIXLEY
Lieutenant General
The Surgeon General

Incl
as

MEDICAL CORPS

POSITION LIST

TITLE	SSI	PROJECTION OF DISTRIBUTION CONT. FOR ASG MIL 1 OCT 78						TITLE	SSI						
GEN OFF	00B							REPROD BIOLOGY	61A						
EXEC MED	60A	2						MED ONCOLOGY	61B						
NUCLEAR MED	60B	1						ENDOCRINOLOGY	61C						
PREV MED	60C	1						RHEUMATOLOGY	61D						
OCCUPATIONAL MED	60D							CLIN PHARMACOLOGIST	61E						
GEN MED	60E	2						INTERNIST	61F	4					
TUL DIS	60F							INF DIS	61G						
GASTROENTEROLOGY	60G							FAM PHYS	61H	7					
CARDIOLOGIST	60H	1						GEN SURG	61J	4					
OB/GYN	60J	3						THORACIC SURG	61K	1					
UROLOGIST	60K	2						PLASTIC SURG	61L						
DERMATOLOGIST	60L	1						ORTHOPEDIC SURG	61M	3					
ALLERGY/IMMUN	60M							FLIGHT SURG	61N						
ANESTHESIOLOGIST	60N	1						PHYSIATRIST	61P						
PEDIATRICIAN	60P	4						THERAPEUTIC RAD	61Q						
PED CARDIOLOGY	60Q							DIAGNOSTIC RAD	61R	3					
CHILD NEUROLOGY	60R							RADIOLOGIST	61S						
OPHTHALMOLOGIST	60S	1						ANATOMICAL PATH	61T						
OTOLARYNGOLOGIST	60T	1						PATHOLOGIST	61U	4					
CHILD PSYCH	60U							CLINICAL PATH	61V						
NEUROLOGIST	60V							PERIPHERAL VAS SURG	61W						
PSYCHIATRIST	60W	1						NEUROSURGEON	61Z						
[illegible]	60Z							TOTAL (MC's):		46	47				
								PHYSICIAN ASSISTANT	0911A	5					

MEDDAC - FT RUCKER

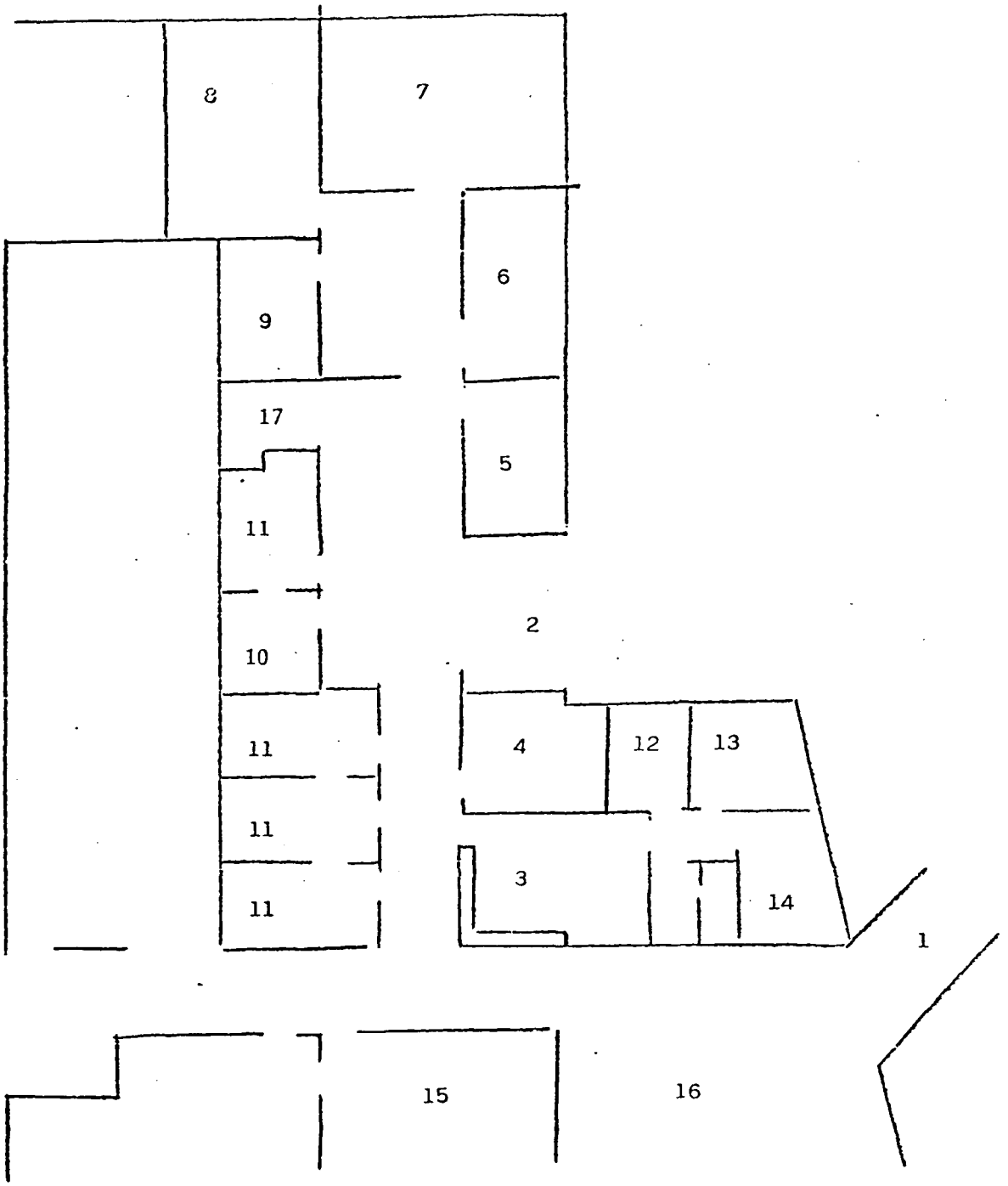
APPENDIX B

EMERGENCY MEDICAL SERVICE FLOOR PLAN

EMERGENCY MEDICAL SERVICE

KEY

1. Entrance for Ambulatory Patients.
2. Ambulance Entrance.
3. Desk
4. TPR
5. Ambulance Service
6. Emergency Treatment Room
7. Suture Area
8. Holding Area
9. Utility Room
10. Nurses Station/Pharmacy
11. Examination/Treatment Rooms
12. Office
13. Break Room
14. Store Room
15. Admissions Room
16. Waiting Area
17. ECG Area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APPENDIX C

ARMY MEDICAL DEPARTMENT PATIENT CARE SURVEY

ARMY MEDICAL DEPARTMENT PATIENT CARE SURVEY

THE ARMY MEDICAL DEPARTMENT WANTS TO PROVIDE YOU WITH THE MOST COMPLETE AND MODERN MEDICAL SERVICES THAT ARE AVAILABLE. THE QUALITY OF THE CARE YOU RECEIVE AND THE COURTESY OF THE STAFF WHO PROVIDE THIS CARE ARE OF CONTINUING INTEREST AND CONCERN.

THE PURPOSE OF THIS SURVEY IS FOR THE MEMBERS OF THE ARMY MEDICAL DEPARTMENT TO LEARN HOW YOU FEEL ABOUT YOUR CARE SO THAT PROPER IMPROVEMENT MAY BE MADE. YOU ARE THE INDIVIDUAL WHO CAN PROVIDE THE BEST INFORMATION ABOUT WHAT MIGHT BE DONE TO BEST MEET YOUR NEEDS.

IF THIS SURVEY IS TO BE OF VALUE, IT IS NECESSARY FOR YOU TO ANSWER EACH QUESTION AS CAREFULLY AS POSSIBLE. IT IS NOT A TEST AND THERE ARE NOT ANY RIGHT OR WRONG ANSWERS. YOUR POINT OF VIEW IS WHAT WE CARE ABOUT, REGARDLESS HOW POSITIVE OR NEGATIVE IT MIGHT BE.

SPECIFIC INSTRUCTIONS ARE PRINTED BELOW. PLEASE READ THESE VERY CAREFULLY. YOUR ANSWERS WILL BE SCORED BY COMPUTER EQUIPMENT AND ALL INFORMATION THAT YOU PROVIDE WILL BE KEPT STRICTLY CONFIDENTIAL.

DIRECTIONS FOR MARKING YOUR QUESTIONNAIRE SHEET: Use only a number 2 pencil (no ink or ballpoint pens). Make heavy black marks that completely fill the circle of your answer. If you wish to change an answer please be sure to erase cleanly. Do not make any stray or accidental marks on the sheet.

EXAMPLES OF IMPROPER MARKS

EXAMPLES OF PROPER MARKS

AGE

- ○ less than 19
- ○ 20 to 29
- ○ 30 to 39
- ○ 40 to 49
- ○ over 50

SEX

- ○ male
- ○ female

YOUR STATUS

- ○ Active Duty Dependent
- ○ Active Duty Sponsor
- ○ Retired Dependent
- ○ Retired Sponsor
- ○ other

YOUR PAY GRADE (If a dependent, indicate the pay grade of your military sponsor

- ○ E1
- ○ E2
- ○ E3
- ○ E4
- ○ E5
- ○ E6
- ○ E7
- ○ E8
- ○ E9
- ○ W1
- ○ W2
- ○ W3
- ○ W4
- ○ 01
- ○ 02
- ○ 03
- ○ 04
- ○ 05
- ○ 05 +

HIGHEST LEVEL OF EDUCATION THAT YOU COMPLETED, (Include GED credits if any.)

- ○ Elem 1 thru 6
- ○ Jr. High 7 thru 9
- ○ Some High School
- ○ High School Diploma
- ○ Some College
- ○ College Degree
- ○ Masters or Doctoral Degree

APPROXIMATELY HOW OFTEN HAVE YOU RECEIVED CARE AT THIS MEDICAL FACILITY DURING THE PAST 12 MONTHS

- ○ 0 to 2 times
- ○ 3 or 4 times
- ○ 5 to 8 times
- ○ 9 to 12 times
- ○ 13 to 15 times
- ○ 16 to 20 times
- ○ 21 to 30 times
- ○ 31 or more times

HAVE YOU PREVIOUSLY COMPLETED THIS SATISFACTION SURVEY?

- ○ Yes
- ○ No

DO YOU PLAN TO MAKE THE MILITARY A CAREER? (If a dependent, does your sponsor intend to make the military a career?

- ○ Yes
- ○ No
- ○ Undecided
- ○ Retired

DID YOU HAVE AN APPOINTMENT SCHEDULED TODAY?

- ○ Yes
- ○ No

INSTRUCTIONS: Only answer the questions below AFTER you have received your medical care for today. Please read each item and then mark the circle which indicates "how satisfied" or "how dissatisfied" you feel. Use the 9-point scale that follows each question. Since there are no "right or wrong" answers, you do not have to struggle or "work" to make your answers exact. Your "general impression" is satisfactory.

EXAMPLE: The community or place where I now live. (note: N = Neutral or Undecided)

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

1. How satisfied are you with military life in general?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

2. How satisfied or dissatisfied are you with the overall treatment and care you have previously received in most other military medical treatment facilities? (If you have had none, please leave blank.)

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

3. The amount of time you had to wait to obtain medical care here today?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

4. The parking facilities provided? (consider the number of spaces and distance from the clinic.)

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

5. The general appearance of this clinic?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

6. The thoroughness (completeness) of the medical examiniation you received?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

7. The amount of information given to you concerning your illness by person(s) who examined and treated you?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

8. The degree of privacy you had when you discussed your problem with the person(s) who examined and treated you?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

9. The amount of interest shown concerning you as an individual by the person(s) who examined and treated you?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

10. The amount of time spent with you during your actual evaluation and treatment?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

11. The manner in which you were treated by the receptionist?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

12. The degree of courtesy and friendliness shown to you by the nurse?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

13. The degree of courtesy and friendliness shown to you by [illegible]

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

14. The convenience of the location of this clinic?

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

15. The way in which laboratory and [illegible]

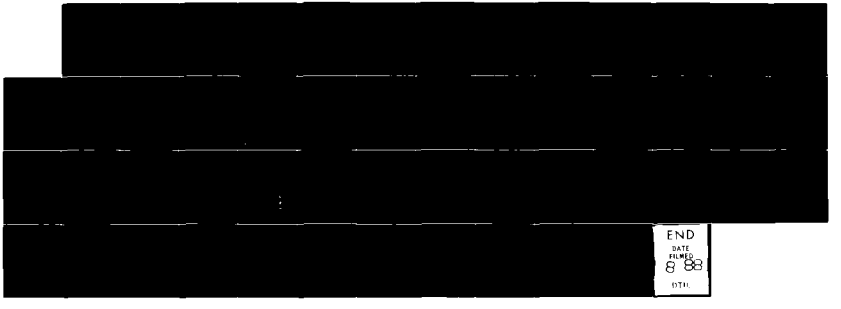
EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

16. The overall, total [illegible]

EXTREMELY DISSATISFIED (1) (2) (3) (4) (N) (6) (7) (8) (9) EXTREMELY SATISFIED

AD-A185 829 A STUDY OF THE EMERGENCY MEDICAL SERVICE SYSTEM AT WOMACK ARMY HOSPITAL F.. (U) ARMY HEALTH CARE STUDIES AND CLINICAL INVESTIGATION ACTIVITY F.. W AUERBACH 2/2

UNCLASSIFIED APR 78 F/G 6/5 NL



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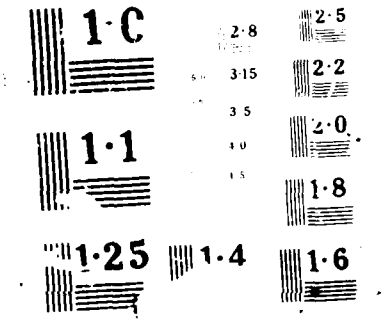
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INSTRUCTIONS: Please complete the following statements by marking one circle for each item:

17. I feel the people working in this clinic

O ...could have done a better job in all areas
O ...were adequate in some areas but could have done better in other areas
O ...did an adequate job
O ...did most of their work efficiently
O ...were outstanding in all areas

18. I feel that the medical treatment I received today was
O ...unacceptable
O ...less than adequate
O ...adequate
O ...more than adequate
O ...outstanding

19. I feel that the examiner's understanding of my medical problem was
O ...very poor
O ...poor
O ...average
O ...good
O ...very good

20. How would you rate the treatment you received in this clinic today compared to the treatment you have received previously in this clinic? (If you have had no previous care here, leave blank.)

O ...Very much better today than before
O ...Much better today
O ...A little better today
O ...About the same as before
O ...A little worse today
O ...Much worse today
O ...Very much worse today than before

21. In filling out this questionnaire, do you believe that honest, negative responses might endanger your current and/or future eligibility for medical care in this or other military hospitals?

O ...Very likely
O ...Quite likely
O ...Possibly
O ...Quite unlikely
O ...Very unlikely

22. In completing this questionnaire, do you think that honest responses showing dissatisfaction might annoy or anger some staff members and negatively affect the care that you receive?

O ...Very likely
O ...Quite likely
O ...Possibly
O ...Quite unlikely
O ...Very unlikely

23. Do you think that this survey will really result in any improvements at this medical facility?

O ...Very unlikely
O ...Quite Unlikely
O ...Possibly
O ...Quite likely
O ...Very likely

24. How did you feel about filling out this questionnaire?

STRONGLY DISLIKED DOING IT (1) (2) (3) (4) (N) (6) (7) (8) (9) DIDN'T MIND DOING IT AT ALL

APPENDIX D

JCAH EMERGENCY SERVICES STANDARDS

Emergency Services*

Principle

Any individual who comes to the hospital for emergency medical care [illegible] initial treatment shall be properly assessed by qualified individuals [illegible] propriate services shall be rendered within the defined capability of the [illegible]

STANDARD I A well-defined plan for emergency care, based on [illegible] munity need and on the capability of the hospital, shall be implemented [illegible] every hospital.

INTERPRETATION The hospital and its medical staff shall promote, help develop, and implement a community-based emergency plan. Whenever [illegible] all hospitals in a community that offer emergency medical services should [illegible] joint effort to identify the readiness of each hospital and its staff to receive and treat emergency patients effectively. From such community planning, [illegible] medical service resources may be classified by capability. In any case, each hospital shall evaluate and classify itself to indicate its capability in providing emergency medical services to the community served. Classification shall be based on the overall capability of the hospital and its medical staff to meet the needs of the community.

The hospital must have some procedure whereby the ill or injured person is assessed and either treated or referred to an appropriate facility, as indicated. The hospital's emergency service shall be classified according to the level of the service provided. Regardless of the nomenclature assigned, the levels may be those of emergency services that are comprehensive to those of a first aid/referral facility. The requisite staffing, facilities, and services shall be provided as delineated in Section [illegible] of the *Manual*.

Specific and general requirements are established for four levels of emergency services. Other comparable classifications, such as state or [illegible] shall be considered acceptable and shall be evaluated for compliance at the appropriate [illegible]

It is recognized that hospitals may offer critical therapeutic services in [illegible] clinical areas such as spinal cord injury, burns, trauma, and so forth. Such [illegible] shall be considered as providing comprehensive (Level I) services for their [illegible] clinical focus of care, while the emergency services otherwise provided shall be evaluated at the appropriate level.

*Although these standards will not become effective for accreditation decision purposes [illegible] they will be applied for consultative purposes during on-site surveys conducted in 1975.

Level I A Level I emergency service offers comprehensive emergency care 24 hours a day, with at least one physician experienced in emergency care on duty in the emergency care area. There shall be in-hospital physician coverage for at least medical, surgical, orthopedic, obstetrical/gynecological, pediatric, and anesthesiology services by members of the medical staff or by senior-level residents, with other specialty consultation available within 30 minutes, as needed. The hospital's scope of services shall include in-house capabilities for managing physical and related emotional problems on a definitive basis. The above requirements apply to a comprehensive-level emergency service provided by a hospital offering care only to a limited group of patients, such as pediatric, obstetrical, ophthalmological, and orthopedic.

Level II A Level II emergency service offers emergency care 24 hours a day, with at least one physician experienced in emergency care on duty in the emergency care area, and specialty consultation available within 30 minutes by members of the medical staff or by senior-level residents. The hospital's scope of services shall include in-house capabilities for managing physical and related emotional problems, with provision for patient transfer to another facility when needed.

Level III A Level III emergency service offers emergency care 24 hours a day, with at least one physician available to the emergency care area within 30 minutes through a medical staff call roster. Specialty consultation shall be available by request of the attending medical staff member or by transfer to a designated hospital where definitive care can be provided.

Level IV A Level IV emergency service offers reasonable care in determining whether an emergency exists, renders life-saving first aid, and makes appropriate referral to the nearest facilities that have the capability of providing needed services. The mechanism for providing physician coverage at all times shall be defined by the medical staff.

Patient Transfer Transfer of patients shall be made in accordance with the community-based hospital emergency plan. A hospital providing emergency care shall be capable of instituting essential life-saving measures and implementing emergency procedures that will minimize further compromise of the condition of any infant, child, or adult being transported.

When a patient is transferred, all pertinent medical information shall accompany the patient. Unless extenuating circumstances are documented in the patient's record, no patient shall be arbitrarily transferred to another hospital if the hospital where he is initially seen has the means for providing adequate care. The patient shall not be transferred until the receiving hospital or facility has consented to accept the patient, and the patient is considered sufficiently stabilized for transport. Responsibility for the patient during transfer shall be established.

Identifying Signs Appropriate signs, consistent with applicable law, shall indicate the direction of the hospital from major thoroughfares, and whether it is designated as a specialized emergency care center. The location of the emergency access area shall also be identified by clearly visible signs.

Disaster Plans The role of the emergency service in the hospital's internal and external disaster plans shall be consistent with the capabilities of the hospital and community served. For requirements of the hospital's disaster plans, refer to the Functional Safety and Sanitation section of this *Manual*.

External Communication — There shall be a communication [illegible] telephone or other appropriate means, that permits [illegible] enforcement agencies, rescue squads, and other emergency [illegible] munity, to provide advance information concerning [illegible] patients.

Where required frequently in the emergency care area, there [illegible] communicating in the language of the predominant [illegible] the hospital emergency service.

STANDARD II — The emergency service shall be well organized, directed, and staffed according to the nature and extent of health [illegible] anticipated and the scope of services offered.

INTERPRETATION — An organizational plan shall be developed [illegible] emergency service within the overall hospital organizational plan [illegible] sibility and accountability of the emergency service to the medical staff [illegible] hospital administration shall be defined in writing.

Direction — The emergency service shall be directed by a physician [illegible] the active medical staff. A deputy director or other qualified physician [illegible] the medical staff shall be designated and authorized to perform the [illegible] director when the latter is unavailable. The director, the deputy director [illegible] qualified physician in charge of a Level I or Level II emergency service [illegible] at least three years of training and/or experience in a specialty [illegible] determined by the medical staff) to the care and treatment of emergency [illegible] The director shall have the authority and responsibility for carrying [illegible] established policies, and for providing overall direction in the [illegible] operation of the service. The director shall assure that the quality [illegible] appropriateness of emergency patient care are evaluated, and that appropriate [illegible] based on the findings of review activities is taken. The credentials [illegible] tor, deputy director, and all other practitioners with emergency service [illegible] shall reflect their training and experience, as well as evidence of current [illegible] petence. The director of a Level I emergency service or his deputy or [illegible] physician designee shall be readily available. Except under unusual circumstances, the position of the director shall be held on a full-time basis.

Direction of a Level III emergency service may be provided by a physician [illegible] of the medical staff or through a multidisciplinary medical staff committee [illegible] the chairman of the committee serving as director of the emergency [illegible]

Medical Staff Coverage — [illegible]

mechanism to assure appropriate [illegible] privilege delineation, [illegible] categorization, and approval by the governing body. For [illegible] requirements, refer to Standard I of the Medical Staff section of this [illegible].

The degree of evaluation and treatment [illegible] any patient [illegible] self or is brought to the emergency [illegible] shall be the [illegible] physician. The [illegible] with which [illegible] emergency care will [illegible] by a physician may be determined by [illegible] personnel [illegible] established by the emergency service director and approved by the medical [illegible]. Rosters designating medical staff members on duty or on call [illegible] and specialty consultation shall be posted in the emergency care area.

Nursing Service Coverage — A designated [illegible] nurse who is qualified [illegible] relevant training, experience, and [illegible] experience in emergency care shall supervise the care provided by [illegible] within the emergency service. Level I and Level II emergency services shall have at least one registered nurse and a sufficient number of other nursing service personnel permanently assigned and on duty within the emergency [illegible] area at all times. The number of nursing service personnel shall be sufficient for the types and volume of patients served. A Level III emergency service shall have a registered nurse available at least on an on-call, in-house basis at all times. The emergency nurse supervisor or head nurse shall participate in committee [illegible] concerned with the emergency service.

Other Staff Coverage — When [illegible] medical technicians or other allied health personnel are used, their duties and their responsibilities to physicians and nurses providing care within the emergency [illegible] area shall be defined in writing. Other staff disciplines shall be [illegible] required.

STANDARD III — The emergency service shall be appropriately integrated with other units and departments of the hospital.

INTERPRETATION — *Laboratory Services* — Level I, Level II, and Level III emergency services shall have readily available at all times clinical laboratory services with the capability of performing all routine studies and standard analyses of blood, urine, and other body fluids. In addition, laboratory services supporting Level I and Level II emergency services shall provide arterial blood gas and pH determinations, coagulation studies, serum and urine osmolality, [illegible] studies, and, as required, toxicological studies. An adequate supply of blood [illegible] available at all times, either in-hospital or from an outside source approved by the medical staff. The hospital must provide for blood typing and cross matching capability, and for blood storage facilities that are readily available to the emergency service.

Radiology Services — Diagnostic radiology services shall be readily available at all times to provide routine studies using both fixed and mobile equipment. For Level I and Level II emergency services, [illegible] of all types [illegible] and nuclear scanning shall be readily available, as needed.

Operating Suite Special Requirements — Level I emergency services shall have prompt access, as needed, to operating suites that have the following capabilities: cardiopulmonary bypass pump oxygenator, operating microscope, thermal control

equipment for the patient and for blood; fracture table; roentgenographic equipment, including image intensifier, endoscopes, all x-rays; electrocardiograph-oscilloscope-defibrillator; pacemaker; mechanical ventilator; and equipment for monitoring direct blood pressure, blood flow rate, and respirations. It is essential that appropriate specialists and anesthesiology and operating room personnel be readily available within a few minutes.

Level II emergency services shall have prompt access to operating [illegible] following capabilities: thermal control equipment for the patient, fracture table, appropriate endoscopic equipment, electrocardiographic defibrillator, mechanical ventilator, and temperature-monitoring. Roentgenographic equipment shall be readily available.

Other Services Depending on the level of emergency service provided, there shall be access to the obstetrical suite and special care units.

Other Manual References For other requirements related to emergency services, refer to the following sections of this *Manual*: Anesthesia Services, Patient Grounds Safety, Functional Safety and Sanitation, Infection Control, Medical Record Services, Medical Staff, Nuclear Medicine Services, Nursing Services, Pathology Services, Pharmaceutical Services, Quality of Professional Performance, Radiology Services.

STANDARD IV **All personnel shall be prepared for their emergency service responsibilities through appropriate training and education programs.**

INTERPRETATION *Orientation Program* A planned, formal orientation program shall be required for all registered and licensed nurses, and for other professional personnel who provide patient care in the emergency service. Where there is no in-house capability of providing this training, a qualified instructor shall be substituted. The program shall be acceptable to the director of the emergency service, or to the committee of the medical staff where there is no director, or to the director of the nursing service. The program shall be of sufficient duration and substance to cover all responsibilities related to each individual's level of participation in the service. The program shall include training in:

- recognition, interpretation, and recording of patients' signs and symptoms, those that require notification of a physician;
- initiation of cardiopulmonary resuscitation and other emergency procedures;
- parenteral administration of electrolytes, fluids, blood, and medications to patients;
- wound care and management of sepsis;
- initial burn care;
- management of injuries to the extremities and [illegible];
- effective and safe use of electrical and electronic life support equipment used in the emergency service;
- prevention of contamination and cross-infection, and
- recognition of and attention to the psychological and social needs of patients and their families.

Continuing Education Program All emergency service personnel shall participate in relevant in-service education programs. The director or his qualified designee shall contribute to the in-service education of emergency service personnel. In-service education shall include safety and infection control requirements as described in this *Manual*. Cardiopulmonary resuscitation training shall be conducted as often as necessary for all physicians, nurses, and specified professional personnel who work in the emergency care area.

The hospital administration shall assure that there are opportunities for physicians, nurses, and, as required, other personnel to participate in emergency service continuing education programs outside the hospital, as needed. Education programs for emergency service personnel shall be based at least in part on the results of emergency care evaluation studies. The extent of participation shall be documented, and shall be realistically related to the size of the staff and to the scope and complexity of the emergency care services provided.

STANDARD V **Emergency patient care shall be guided by written policies and procedures.**

INTERPRETATION There shall be written policies and procedures specifying the scope and conduct of patient care to be rendered in the emergency service. Such policies and procedures must be approved by the medical staff and hospital administration, and shall be reviewed at least annually, revised as necessary, dated to indicate the time of the last review, and enforced. The policies and procedures in Level I, Level II, and Level III emergency services and, as appropriate, in Level IV emergency services, shall relate to at least the following:

- Location, storage, and procurement of medications, blood, supplies, and equipment at all times.
- Provision of care to an unemancipated minor not accompanied by parent or guardian, or to an unaccompanied unconscious patient.
- Circumstances under which the patient's personal physician is to be notified or given reports.
- Confidentiality of patient information and the safeguarding of records.
- Release of authorized information and materials to police or health authorities.
- Transfer and discharge of patients.
- The emergency medical record, including any consent for treatment.
- Infection control measures, including procedures for observing the possibility of contamination and cross-infection.
- Procedures to be followed in the event of equipment failure.
- Pertinent safety practices.
- Control of traffic, including visitors.
- Dispensing of medications in accordance with the requirements of the Pharmaceutical Services section of this *Manual*.
- The handling and safekeeping of patients' valuables.
- The role of the emergency service in the hospital disaster plans.

- Specification of the scope of treatment allowed and the [illegible] specific procedures that may not be performed by medical [illegible] the emergency service, and the use of anesthesia.
- Who, other than physicians, may perform special procedures [illegible] circumstances, and under what degree of supervision. Such [illegible] clude, but are not limited to, cardiopulmonary resuscitation [illegible] direct defibrillation; endotracheal intubation; tracheotomy [illegible] reotomy; respiratory care, including assisted ventilation and [illegible] the administration of parenteral antiarrhythmic and other [illegible] cations; and the obtaining of arterial and venous blood samples [illegible] laboratory specimens.
- The use of standing orders.
- The property exchange system, when necessitated by the transfer [illegible] transfer of patients.
- Circumstances that require the patient to return to the emergency [illegible] treatment.
- The emergency management of individuals who have actual or suspected exposure to radiation or who are radioactively contaminated. [illegible] may include radioactivity monitoring and measurement; designation [illegible] any required preparation of space for evaluation of the patient, including [illegible] required discontinuation of the air circulation system to prevent the spread of contamination, decontamination of the patient through an appropriate cleansing mechanism, and containment, labeling, and disposition of contaminated materials. The individual responsible for radiation safety should be notified.
- Alleged or suspected rape, or sexual molestation. Criteria for [illegible] medicolegal evaluation should include examination and treatment, [illegible] patient consent; collection, retention, and safeguarding of specimens, photographs, and other evidentiary material, maintaining a detailed receipt for all material released; and, as legally required, notification of, and release of information to, the proper authorities. Examination of and consultation with the patient shall take place only when visual and auditory privacy are assured.
- Alleged or suspected child abuse. Criteria for alerting emergency service personnel to the possibility of child abuse should be developed. Pertinent information may be obtained from the history, physical examination, laboratory and radiological tests, photographs, and observations of parent-child interactions. In addition to such information, the medical record [illegible] document the treatment given and any required reporting to the proper authorities.
- The management of [illegible] emergencies.
- Individuals dead on arrival and any legally required collection [illegible] evidence and reporting to the proper authorities.
- The management of patients who are under the influence [illegible] alcohol, or who are emotionally ill or become difficult to manage.
- The initial management of patients with burns, hand injuries, [illegible] fractures, multiple injuries, poisoning, animal bites, gunshot [illegible] wounds, and other acute problems.

- Precautions to be taken in preventing the occurrence of accidents to suicidal persons or irrational patients.
- Tetanus and rabies prevention/prophylaxis.

Current toxicologic reference materials and antidote information shall be readily available within the emergency service, along with the telephone number of the regional poison control information center. A list of referral and consultation services shall be prominently displayed and shall include, as appropriate, the regional coordinating office for radiological emergency assistance, antivenin service, county coroner or medical examiner, police department, state and local health departments, ambulance transport and rescue services, tissue donation centers, and special care services not provided by the hospital.

STANDARD VI **The emergency service shall be designed and equipped to facilitate the safe and effective care of patients.**

INTERPRETATION The emergency care area shall be easily accessible from within the hospital to permit rapid admission of patients treated initially in the emergency service. The emergency service should be in proximity to the emergency entrance, on the same level at which patients are transported to the area. The entrance shall be clearly identified externally, and shall be accessible to emergency vehicles and pedestrian traffic. If a separate approach is provided for ambulatory patients, any differences in levels shall be bridged by a ramp rather than by steps. All emergency service entrance doors shall be well lighted and protected from the weather. Entrance doors shall be wide enough to accommodate patients, attendants, and equipment. Stretchers and wheelchairs should be stored immediately adjacent to the emergency service entrance and should not obstruct entry. A waiting area, telephone, and lavatory facilities should be available to patients seeking emergency medical care and to individuals accompanying them. Unauthorized individuals shall be prohibited from entering the treatment and work areas of the emergency service.

The design of the emergency service area shall facilitate the visual and auditory privacy of the patients, without compromising patient care. Sufficient space shall be provided for the examination and treatment of patients seeking emergency care, particularly for the management of patients with life-threatening conditions.

Observation Beds When observation beds are permitted, there shall be guidelines for the type of patient use, the maximum time period of use, the mechanism for providing constant surveillance, and the type of nurse/patient call system. Use of an observation bed should ordinarily be limited to less than twelve hours for any one patient.

Internal Communication When warranted by the size and configuration of the emergency care area, an intercommunication/alarm system shall be provided between the nurses' station and any examination, treatment, or other areas from which additional personnel may need to be summoned in an emergency. Rapid communication with other departments in the hospital must be ensured.

Special Provisions When indicated, special examination rooms such as rooms for gynecological, ophthalmologic, orthopedic, or pediatric patients should be provided. When general anesthesia is administered in the emergency service, the anesthesia area shall meet the requirements of the National Fire Protection Associa-

[illegible] (NFPA publication [illegible] and the Anesthesia [illegible] The Mental Protective security may be required in the care of [illegible] emotionally disturbed patients.

Equipment and Supplies — Equipment and supplies used in the [illegible] shall be of the same quality as those used throughout the hospital [illegible] suitable for all sizes of patients treated. Equipment shall be checked on [illegible] basis in accordance with the hospital preventive maintenance pro[illegible] requirements of the Functional Safety and Sanitation section of the [illegible]

At least the following shall be readily available for use within Level I [illegible] emergency services and, as appropriate, Level III and Level IV emer[illegible]

- Oxygen and the means of administration
- Mechanical ventilatory assistance equipment, including [illegible] breathing bag, and ventilator
- Cardiac defibrillator with synchronization capability
- Respiratory and cardiac monitoring equipment
- Thoracentesis and closed thoracostomy sets
- Tracheostomy set
- Tourniquets
- Vascular cutdown sets
- Laryngoscopes and endotracheal tubes
- Tracheobronchial and gastric suction equipment
- Urinary catheters with closed volume urinary systems
- Pleural and pericardial drainage set
- Minor surgical instruments
- Splinting devices
- Emergency obstetrical pack

Standard drugs [illegible] [illegible] geographic areas as indicated [illegible] [illegible] syringes and needles, parenteral fluids and infusion sets, [illegible] and blood administration sets, and surgical supplies must be ava[illegible] mediate use. Emergency drug carts or emergency drug storage [illegible] checked by an appropriate, designated individual at least once per [illegible] each use, to assure that all items required for immediate availability [illegible] contained in the cart and are in usable condition. [illegible] system designed to assure continued integrity of [illegible] of use. Uniformity in the arrangement of supplies [illegible] rapid implementation of emergency care. There [illegible] biologicals and all other supplies requiring such sto[illegible] vice.

Examination tables shall be stable [illegible] lock, and [illegible] patient. Stretchers and examination tables that [illegible] recommended. Siderails and safety straps should [illegible]

STANDARD VII — A medical record shall be maintained on [illegible] seeking emergency care and shall be incorporated into the patient's [illegible]

[illegible] record [illegible] adequately identify all persons [illegible] emergency care.

INTERPRETATION [illegible] all [illegible] and [illegible] emergency [illegible] shall [illegible] made available [illegible] the attending physician [illegible] emergency [illegible] the medical record [illegible] contain documentation of [illegible] following:

- Patient identification. When not obtainable, the reason shall be entered in the medical record.
- Time and means of arrival.
- Pertinent history of the illness or injury and physical findings, including the patient's vital signs.
- Emergency care given to the patient prior to arrival.
- Diagnostic and therapeutic orders.
- Clinical observations, including results of treatment.
- Reports of procedures, tests, and results.
- Diagnostic impression.
- Conclusion at the termination of evaluation/treatment, including final disposition, the patient's condition on discharge or transfer, and any instructions given to the patient and/or family for follow-up care.
- A patient's leaving against medical advice.

The medical record shall be authenticated by the practitioner who is responsible for its clinical accuracy.

It is recommended that the ambulance record of the patient be available to the practitioner providing emergency care and that it be filed with, but not necessarily as a part of, the patient's record.

Control Register. A control register shall be continuously maintained, and shall include at least the following information for every individual seeking care: identification, such as name, age, sex; the date, time, and means of arrival; the nature of the complaint; the disposition; and time of departure. The names of individuals dead on arrival shall also be entered in the register. Information obtained from the register may aid in planning staffing for the emergency service, and can be used as a guide in selecting records for the evaluation of the quality and appropriateness of services provided. Information obtained from the register may also be used in appropriate institutional planning of health care services based on community need.

STANDARD VIII The quality and appropriateness of patient care provided in the emergency service shall be continuously reviewed, evaluated, and assured through establishment of quality control mechanisms.

INTERPRETATION The director of the emergency service or the chairman of the emergency care committee shall be responsible for assuring that a timely review of emergency patient care is performed and documented. The review shall be performed at least monthly, and shall involve the use of the medical record and preestablished criteria. When there is rapid turnover of physician personnel, as in the

[illegible] medical [illegible] treatment [illegible] shall [illegible] the [illegible] the [illegible] the twenty [illegible] the emergency [illegible]. Periodic conferences on [illegible] other aspects of emergency care are recommended [illegible] nursing service personnel to identify and review any [illegible] ening in the emergency team effort.

At least the following quality control mechanisms [illegible]:

- When authorized, a copy of the record of emergency [illegible] be available to the private practitioner or medical facility [illegible] follow-up care.
- There shall be a timely review of X-rays, with the official [illegible] available to the private practitioner and to the practitioner [illegible] emergency care. There shall be a mechanism for notifying and [illegible] patients who require additional radiologic studies or for whom a [illegible] finitive radiologic interpretation has been made.
- Reports of laboratory test results shall be available [illegible] timely manner [illegible] private practitioner and to the practitioner providing emergency [illegible] shall be a mechanism for notifying and recalling patients who [illegible] ditional or repeat laboratory studies.
- Interpretation of electrocardiograms by physicians with such privileges [illegible] be available to the private practitioner and to the practitioner [illegible] emergency care. There shall be a mechanism for notifying and [illegible] patients who require additional electrocardiographic studies.
- Patient transfer shall be carried out safely and in accordance with [illegible] transfer protocol.
- Emergency service patients who receive blood transfusions shall be [illegible] in the medical staff's review of blood utilization.
- Emergency service patients who receive antibiotics shall be included in the medical staff's review of the clinical use of antibiotics.
- Emergency medical records of the previous twenty-four hours should, when possible, be reviewed daily on at least a representative sample basis by the medical director or his designee to assess the adequacy of the services rendered and of the documentation.
- [illegible] specimens removed from patients in the emergency care [illegible] shall [illegible] to the pathologist for examination, except for those specimens [illegible] are given directly in the chain of custody to [illegible] representatives.

APPENDIX E

HSC APC PROGRAM DOCUMENT

AMBULATORY PATIENT CARE (APC) PROGRAM

Emergency Medicine (EMS)

1. REQUIREMENT. Each hospital will establish an Emergency Medical Service (EMS) Program consistent with anticipated health care needs of the supported population.

2. INTERPRETATION.

a. A well-defined plan for emergency care based on the needs of the population served will be developed and implemented. As a minimum, the hospital must have assessed the needs of the military community in view of its available resources and established procedures whereby emergency patients can be assessed and either treated or referred for treatment as indicated.

b. EMS support will be consistent with the scope of services provided, and will be well organized, properly directed, and adequately staffed in this regard. The Chief, Emergency Medical Service will be a full or part-time duty of a specified member of the medical staff. An RN will be designated to supervise the care provided by Department of Nursing personnel. When Emergency Medical Technicians (EMT's) and other allied health personnel are used, their duties and responsibilities to the physicians and nurses providing care in the emergency service area will be defined in writing.

c. Written EMS policies and procedures will be developed and utilized. These shall include but are not limited to:

(1) Role of the emergency service in the hospital disaster plan.

(2) Categorization of the service to delineate the scope of emergency treatment allowed and procedures not to be performed.

(3) Control measures for non-patient access to the emergency service area.

(4) Infection control.

(5) Release of medical information.

(6) Transfer and discharge of patients.

(7) Guidelines pertaining to consent to medical care (unemancipated minors not accompanied by parent or guardian, unaccompanied unconscious patients, etc.)

(8) Handling of patient with actual or suspected exposures to radiation or radioactive materials.

(9) Handling of victims of actual or suspected criminal acts, i.e., rape and child abuse.

(10) Death procedures.

(11) Management of drug/alcohol abuse patients and the emotionally ill.

(12) Initial management of patients with conditions which may not be familiar to all physicians (i.e., burns, hand injuries, fractures, multiple injuries, poisoning, and animal bites).

(13) Dispensing of medications to emergency patients.

(14) Equipment procedures, to include location of stored equipment, repair/replacement of nonfunctioning items, and exchange procedures when patients are transferred.

(15) Credentialing of care providers to include who may perform special procedures, under what circumstances, and under what degree of supervision (Chapter 2D).

d. EMS personnel will have education and training appropriate to their patient care responsibilities. An orientation program for new personnel and a continuing education for assigned personnel will be provided and documentation of participation will be maintained. Cardiopulmonary resuscitation (CPR) training will be provided to all EMS personnel as a part of this program.

e. A medical record will be maintained on every patient treated and a central log will adequately identify all patients seeking emergency care. The medical record shall contain:

(1) Patient identification.

(2) Time/means of arrival and time of departure.

(3) Care given the patient prior to arrival at the EMS facility (may be a copy of EMT treatment record if appropriate).

(4) Pertinent history and physical findings.

(5) Diagnostic and therapeutic orders.

(6) Documentation of informed consent if appropriate.

(7) Results of procedures and tests.

(8) Medical assessment.

(9) Result of treatment and disposition.

(10) Follow-up instructions to patient and/or family.

(11) Documentation if patient leaves against medical advice.

f. The EMS facility will be designed and equipped to facilitate safe and effective patient care. The emergency service area shall be clearly identified and accessible from both inside and outside the hospital. Access routes and entryways should not be obstructed. The design of the facility should provide sufficient space for examination and treatment of patients and allow for auditory and visual privacy to the extent possible.

g. The patient care provided in the EMS Program will be continually reviewed for quality through the establishment of an appropriate medical care evaluation effort. Documentation of EMS medical care evaluation will be maintained at least on a monthly basis. Daily review of EMS records by the Chief, Emergency Medical Service, or his designated representative is encouraged.

3. REFERENCES.

a. APC Model #16.

b. JCAH Standards.

4. POINT OF CONTACT. The Ambulatory Patient Care Program Director is the point of contact for matters related to this requirement.

5. EVALUATION CRITERIA.

a. Does the hospital have an EMS Program?

b. Is the program designed to meet the medical needs of the population served?

c. Are appropriate medical treatment and referral guidelines established?

d. Is a member of the medical staff designated Chief, Emergency Medical Service?

e. Has a RN been designated to supervise care provided by Department of Nursing personnel?

f. Are the duties and responsibilities of allied health personnel defined in writing?

g. Are written EMS procedures developed and utilized?

h. Have all EMS care providers been credentialed?

i. Is there an orientation program for newly assigned EMS personnel?

j. Is there a documented continuing education program for EMS personnel?

k. Are all EMS personnel trained or being trained in CPR?

l. Is an adequate record of medical treatment in the EMS facility maintained?

m. Does the central log adequately identify all patients seeking emergency medical care?

n. Is the EMS facility clearly identified and accessible from both inside and outside the hospital?

o. Are access routes and entryways free of obstructions to passage of patients, wheelchairs, litters, etc.?

p. Is there sufficient space provided for examination and treatment of patients?

q. Is a viable quality of care evaluation established, functioning, and documented?

6. REPORTING REQUIREMENTS. Emergency Medical Services Report will be submitted to HQ, HSC, ATTN: HSPA-A, in the format found in Chapter 9, Section B(3).

7. SPECIAL INSTRUCTIONS. None

APPENDIX F

CAPE FEAR VALLEY HOSPITAL ER WORKLOAD

CAPE FEAR VALLEY HOSPITAL

EMERGENCY ROOM WORKLOAD

1977

MONTH	WORKLOAD	(CHAMPUS OR MILITARY PATIENTS)
JAN	4523	118
FEB	4865	96
MAR	4942	91
APR	4549	99
MAY	4667	107
JUN	4424	93
JUL	4764	100
AUG	4434	121
SEP	4326	79
OCT	3880	60
NOV	3582	107
DEC	3778	112
	52734	1183

APPENDIX G

CATEGORIZATION LETTER

DEPARTMENT OF THE ARMY
U.S. ARMY MEDICAL DEPARTMENT ACTIVITY
FORT BRAGG, NORTH CAROLINA 28307

9 MAR 1978

AFZA-MA-XO

SUBJECT: Categorization of Hospitals

Mr. Philip Guy, Chairman
Region "M" EMS Committee
Region "M" Council of Governments
801 Arsenal Avenue
Fayetteville, North Carolina 28305

1. We have reviewed the emergency facilities available at Womack Army Hospital, Fort Bragg, North Carolina, in accordance with the guidelines contained in "Categorization Guidelines," dated 15 November 1976.

2. The inclosure depicts our current capabilities with regard to levels of care available, physician availability, and ancillary and support services availability. Based on Section IV, "Guidelines for Categorization," of the "Categorization Guidelines" document, it is recommended that Womack Army Hospital be designated as a Major Emergency Center. This designation is equivalent to the Level II Hospital Emergency Department classification per the revised JCAH Standards for Emergency Care Services, which will be effective, for accreditation purposes, beginning 1 January 1979.

FOR THE COMMANDER:

1 Incl
as

JOHN T. READ
CPT, MSC
Adjutant

CHACK ARMY HOSPITAL
335 Beds

CAPABILITY POSITION: MAJOR EMERGENCY CENTER

CAPABILITY POSITION FOR PURPOSES OF CATEGORIZATION OF HOSPITAL EMERGENCY SERVICES

I	II			III				IV							
Emergency Patient	Levels of Care Available			Physician Availability				Ancillary & Support Services Availability							
								Clinical Laboratory		Diagnostic Radiology		Transfusion Services		Inhalatio Services	
	Stabili-zation	Stabili-zation & Definitive	Stabili-zation, Definitive & Rehabili-tative	On Call	Hours in Facility Per Day	Specify Hours in ED Per Day	24 Hour Coverage	On Call Hours Per Day	24 Hour Coverage	On Call Hours Per Day	24 Hour Coverage	On Call Hours Per Day	24 Hour Coverage	On Call Hours Per Day	2- Hou Cove
Trauma (1)		Yes					Yes		Yes		Yes		Yes	16	
Burn (2)	Yes						Yes		Yes		Yes		Yes	16	
Acute Cardiac		Yes					Yes		Yes		Yes		Yes	16	
Poisoning		Yes					Yes		Yes		Yes		Yes	16	
High Risk Infant (3)	Yes						Yes		Yes		Yes		Yes	16	
Behavioral: (4)															
Alcoholism			Yes				Yes		Yes		Yes		Yes	16	
Drug			Yes				Yes		Yes		Yes		Yes	16	
Psychiatric			Yes				Yes		Yes		Yes		Yes	16	

NOTES: See additional sheet.

NOTES:

(1) No neurosurgeon available. These cases are handled through military medical evacuation channels.

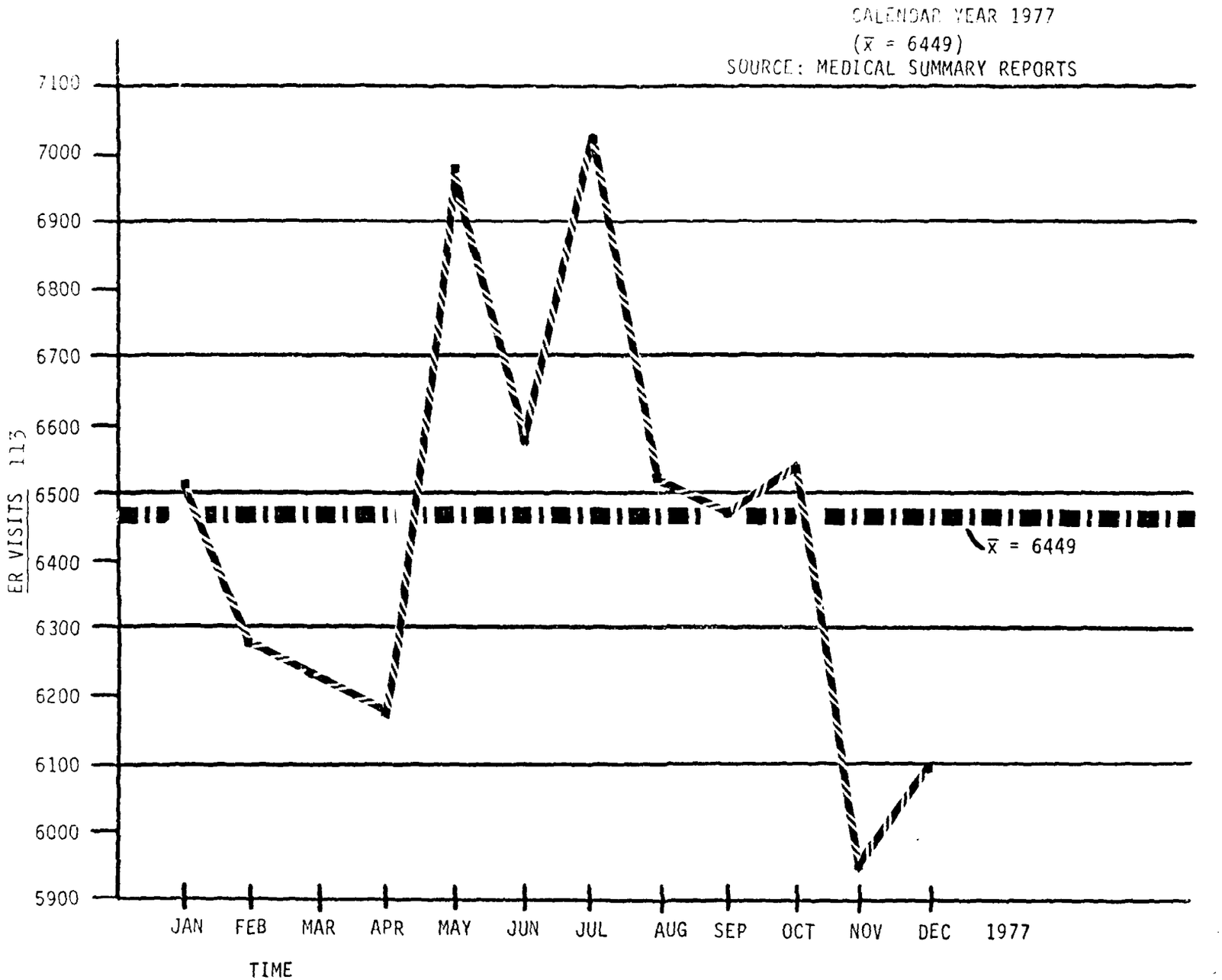
(2) All eligible members suffering from serious burns are medically evacuated to Brooke Army Medical Center, San Antonio, Texas. A burn team from Brooke can also be air transported to this area for the purpose of providing specially trained medical escort for the above patients.

(3) High-risk infants are transferred to either Duke University Medical Center, Durham; North Carolina Memorial Hospital, Chapel Hill; or Baptist Hospital, Winston-Salem.

(4) Inpatient psychiatric care (30-bed psychiatric unit available) is limited to active duty military only.

APPENDIX H

DATA TABLES (6)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6800
6700
6600
6500
6400
6300
6200
6100
6000
5900
ER VISITS 113
$\bar{x}$ = 6449
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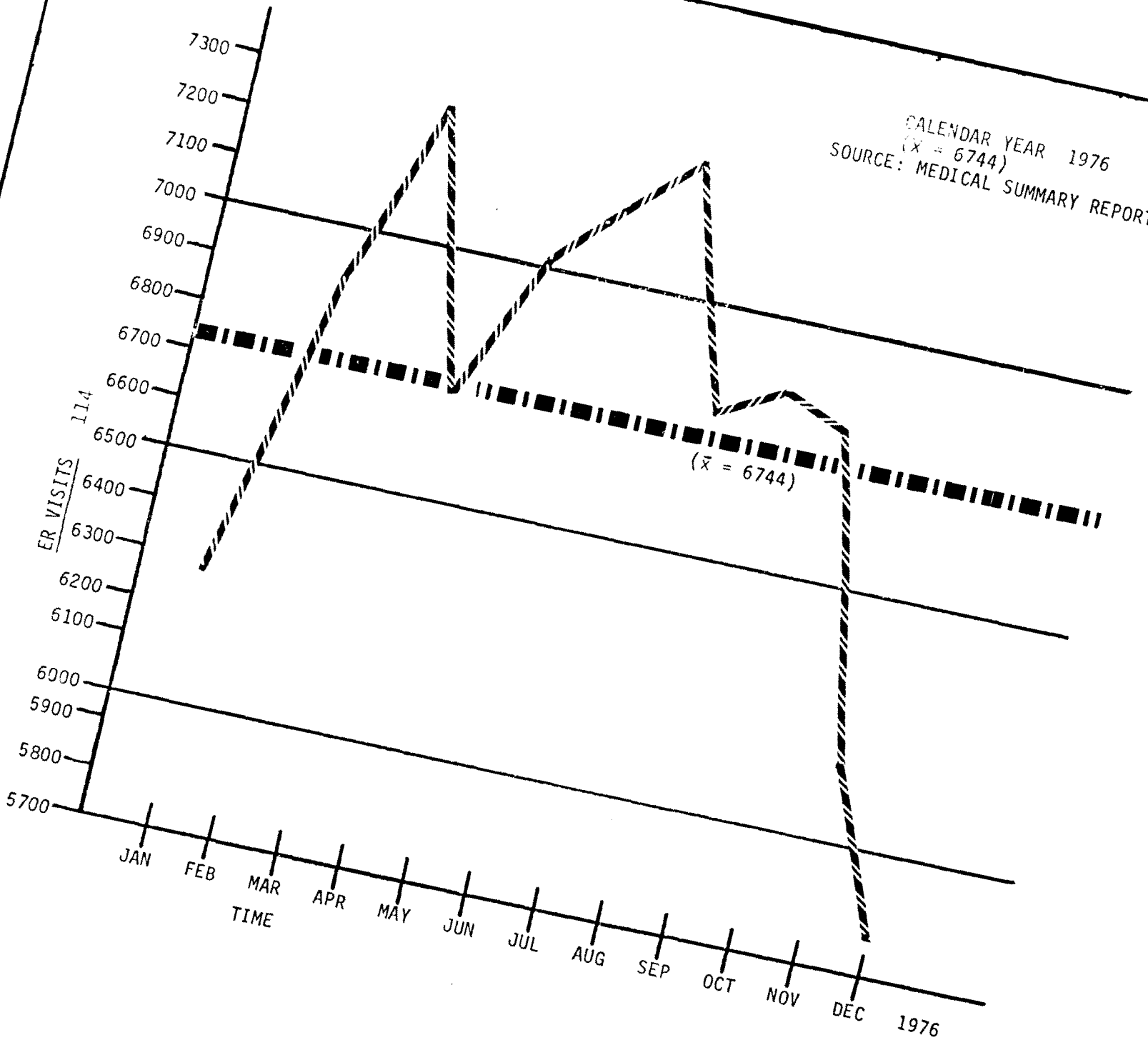
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
1977
TIME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7100
7000
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6800
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6600
6500
6400
6300
6200
6100
6000
5900
5800
5700
ER VISITS
($\bar{x}$ = 6744)
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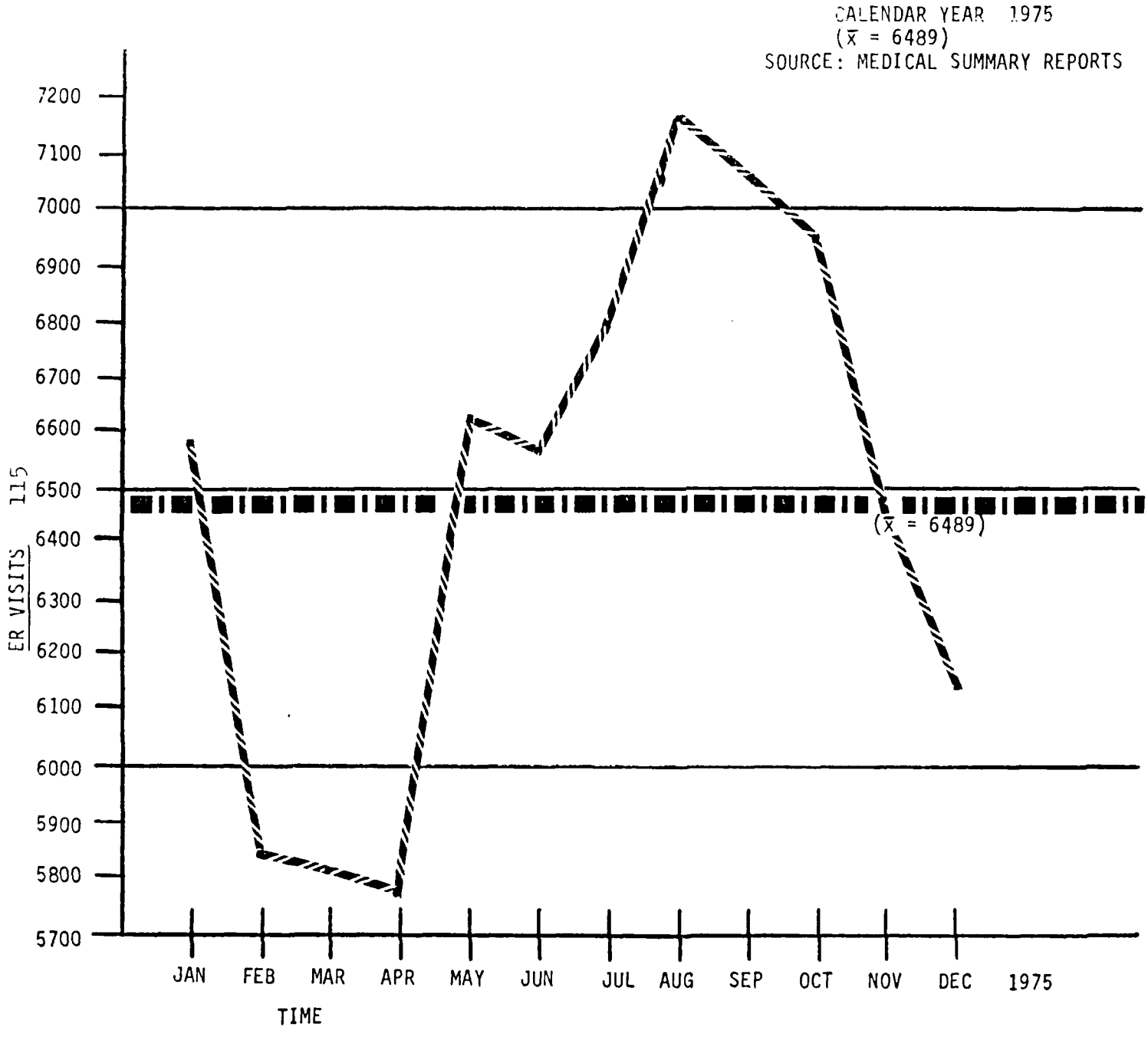
1976
TIME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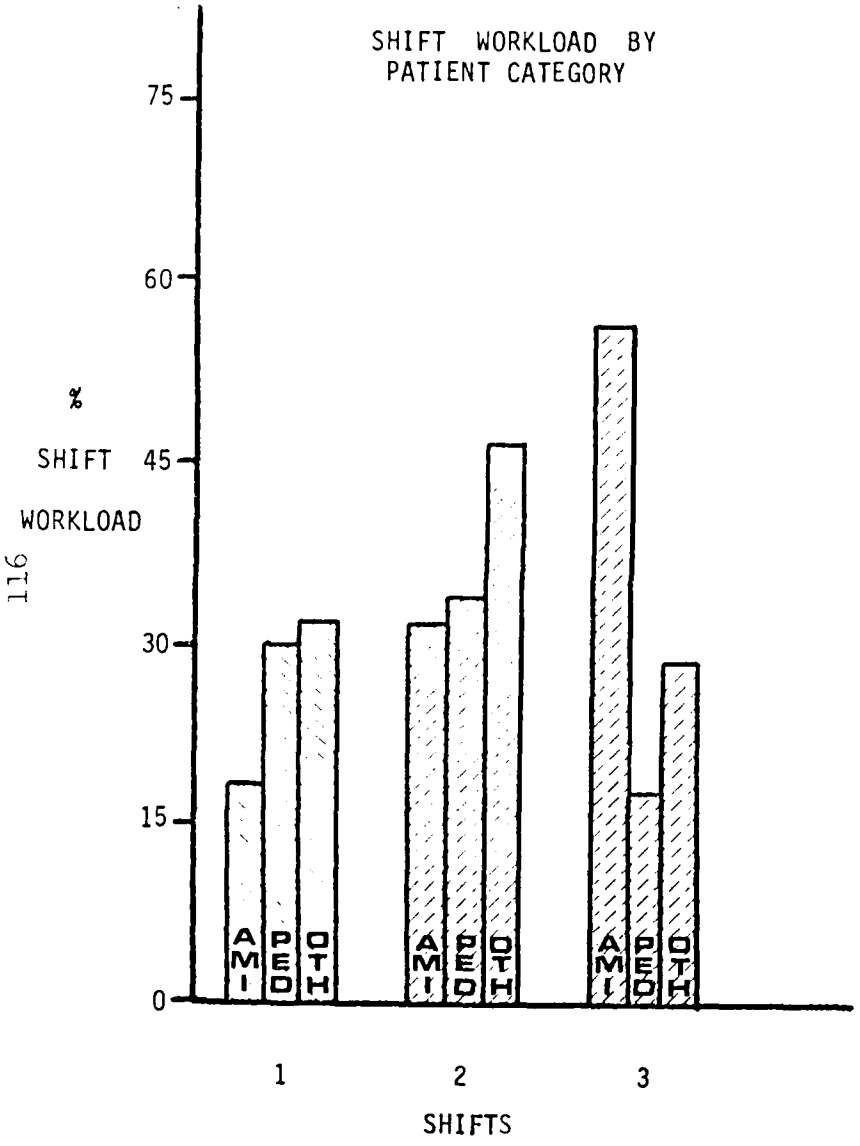
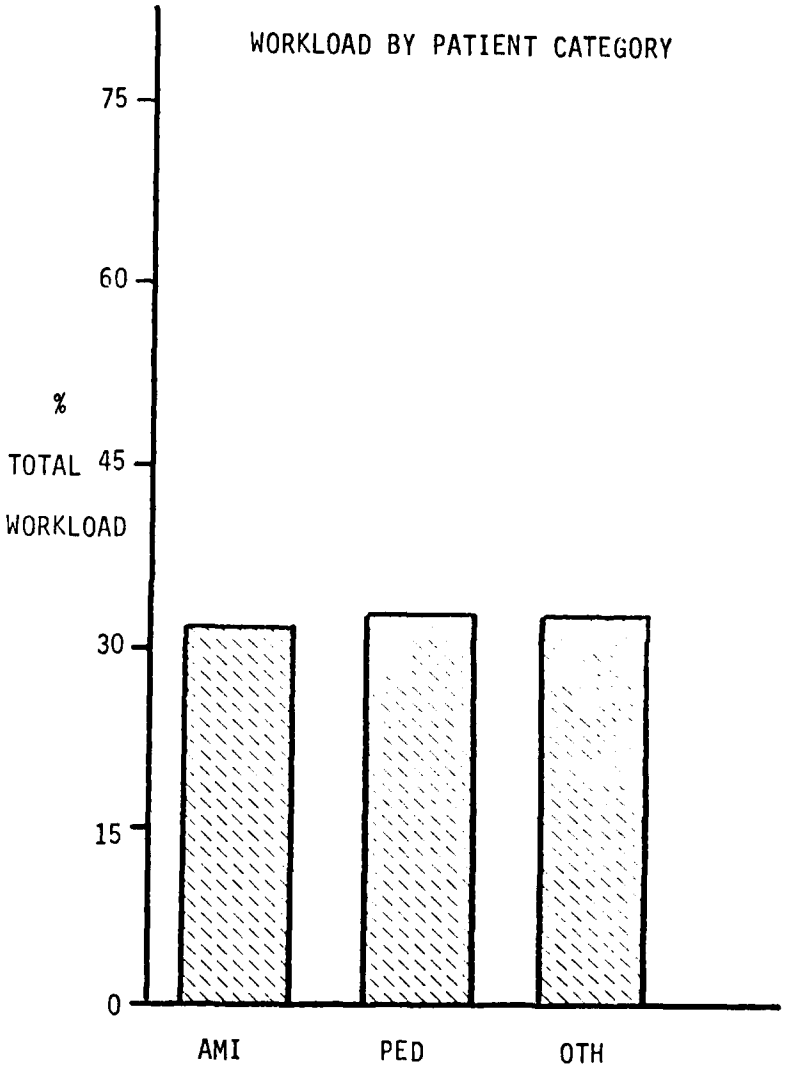
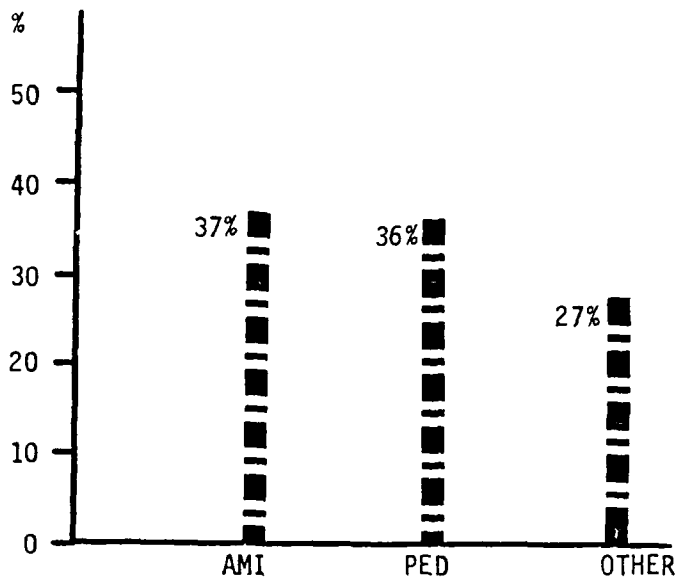
5900
5800
5700
ER VISITS 115
($\bar{x}$ = 6489)
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
1975
TIME

WEEKDAY WORKLOAD ANALYSIS





AVERAGE WEEKDAY EVENING WORKLOAD ANALYSIS



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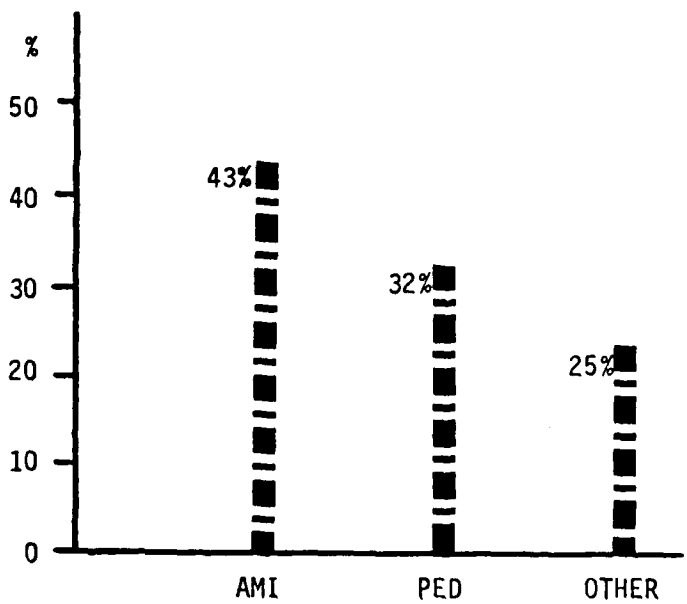

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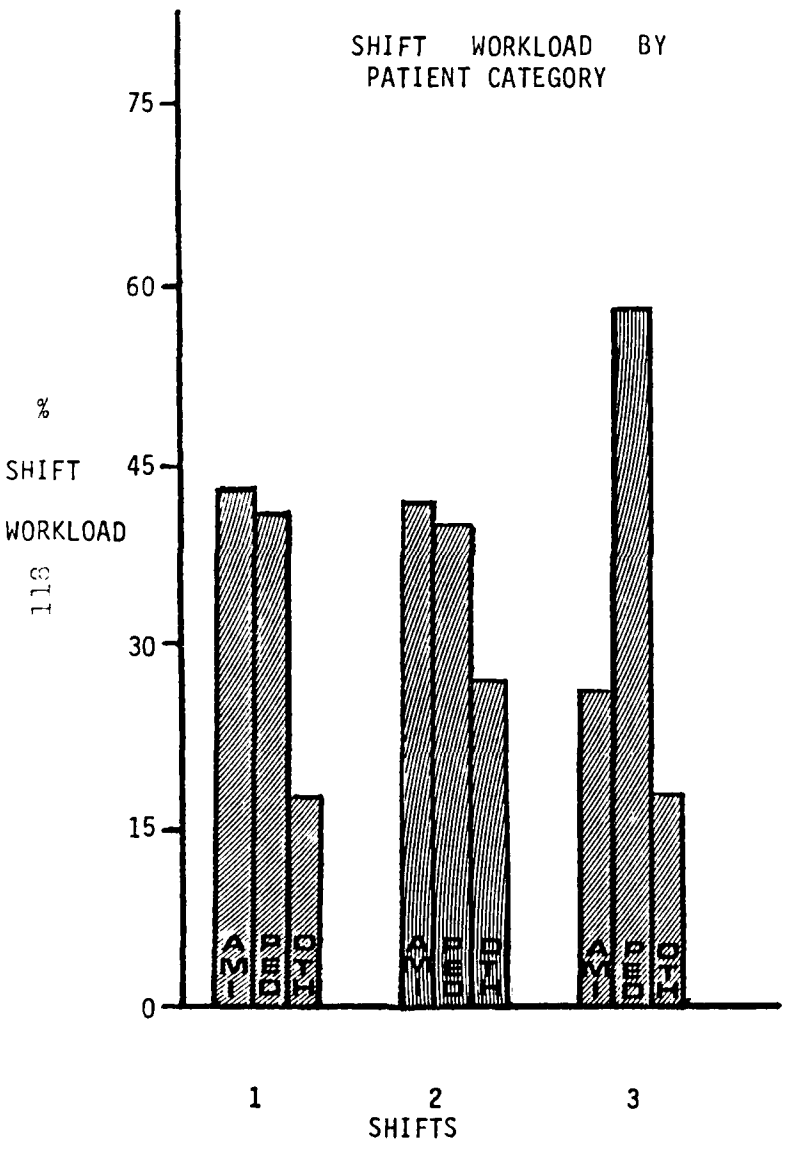

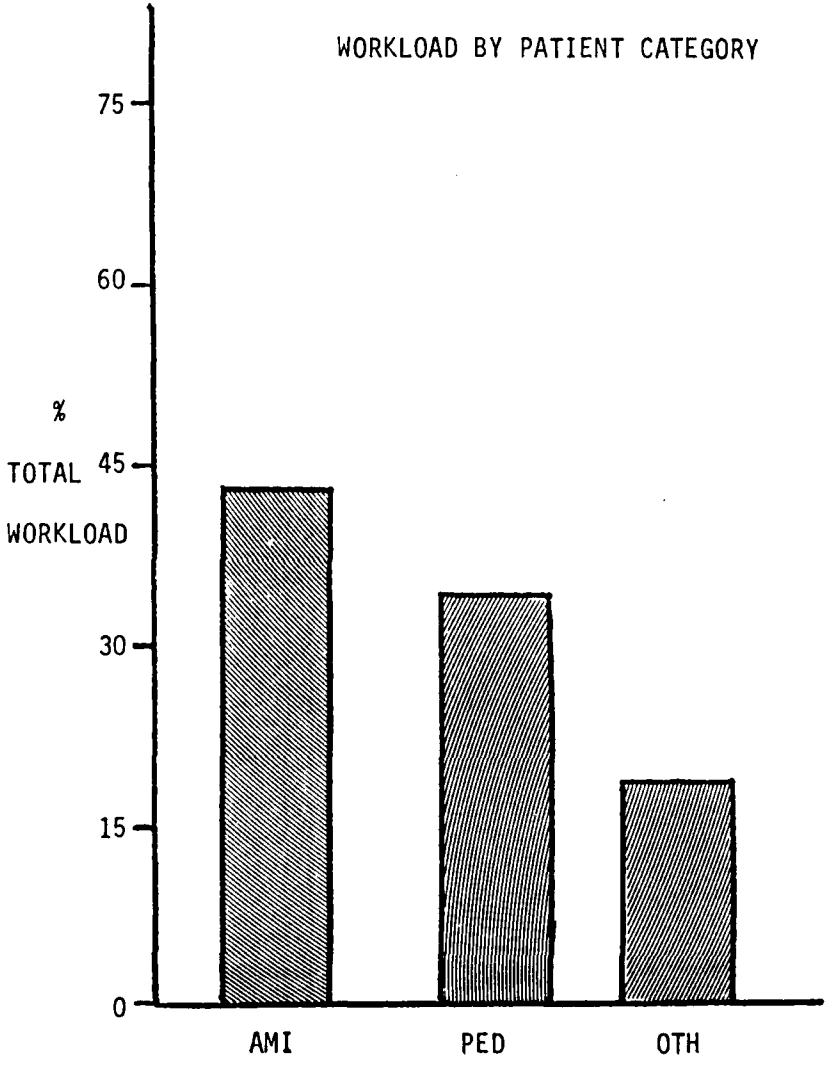

APPENDIX I

ER SURVEY DOCUMENT

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is The Adjutant General Center.

120

REFERENCE OR OFFICE SYMBOL	SUBJECT
AFZA-MA-PS	Survey of Emergency Room Services

TO	FROM	DATE	CMT
ALL PHYSICIANS	[illegible]	21 Nov [illegible]	

1. As part of an extensive retrospective and prospective study of the Emergency Room procedures, staffing and indeed the entire operation, a two-week survey will be conducted in the Emergency Room from 4 December thru 18 December. The information gathered will be of tremendous help to eliminate problem areas and focus on change.

2. Obviously a survey is only as good as the information given. A section of the survey sheet will need to be filled out by the physician or PA seeing the patient. I request your very sincere cooperation, even though it will require some time. If you want change, and we all agree there is much to be gained, then you must provide the input.

WAYNE R. ELISNIK, M.D.
Colonel, MC
Chief, Professional Services

EMERGENCY ROOM DATA COLLECTION FORM

Top portion of form to be completed by Emergency Room Personnel

1-PATIENT IDENTIFICATION

3-DATE & TIME

4-CHIEF COMPLAINT (As stated by patient)

2-AGE:

5-PATIENT'S STATED REASON FOR COMING TO ER AS OPPOSED TO [illegible] TIME:

6-Ask patient if he/she would have gone to Specialty Clinic (Medical-Surgical, OB-GYN, Orthopedic, etc) if clinic had been open, or if appointment had been available now:

DUTY HOURS	AFTER DUTY HOURS
A-YES ( ) B-NO ( )	A-YES ( ) B-NO ( )

7-Ask patient if he/she would have gone to an Acute Minor Illness Clinic if it had been open?

A-YES ( ) B-NO ( )

This portion of form to be completed by Physician/PA

8-TIME SEEN BY PHYSICIAN/PA

9-FINAL DIAGNOSIS

10-LAB/X-RAY SPEED:

A-NONE ( )
B-BEFORE SEEING PHYSICIAN/PA ( )
C-AFTER SEEING PHYSICIAN/PA ( )

11-WAS SPECIALTY CONSULTATION REQUESTED DURING THIS ER VISIT?

A-YES ( ) B-NO ( )

12-DISPOSITION:

A-ADMIT ( )
B-TRANSFER ( )
C-REFER TO SPEC CLINIC ( )
D-HOME/UNIT ( )
E-QUARTERS ( )
F-TO TMC ( )

13-TIME OUT:

14-PHYSICIAN ASSESSMENT (Circle One) OF MEDICAL PROBLEM:

1.....2.....3.....4.....5.....6.....7.....8.....9

True Emergency — Convenience Visit

15-COULD PATIENT HAVE BEEN TREATED IN TMC IF IT WAS OPEN?

A-YES ( ) B-NO ( )

16-LOWEST LEVEL OF PRACTITIONER WHO COULD HAVE TREATED PATIENT:

A-PHYSICIAN
B-PA
C-AMOSIST
D-NURSE
E-ENLISTED MEDICAL SPECIALIST UNDER M.D./PA SUPERVISION

17-PRACTITIONER WHO ACTUALLY TREATED PATIENT:

A-PHYSICIAN
B-PA
C-AMOSIST
D-NURSE
E-ENLISTED MEDICAL SPECIALIST UNDER M.D./PA SUPERVISION

18-PHYSICIANS ASSESSMENT OF HIS COMFORT IN TREATING THIS PROBLEM:

1.....2.....3.....4.....5.....6.....7.....8.....9

My Specialty — Very Uncomfortable

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