



ACKNOWLEDGMENTS

LOCATION FOR AN INTENSIVE CARE UNIT, REYNOLDS
ARMY HOSPITAL, FORT SILL, OKLAHOMA

The writer wishes to express sincere appreciation to the commander of Reynolds Army Hospital, Fort Sill, Oklahoma, and to the members of his staff for their consideration and courteous assistance during the period of this study.

A Problem Solving Thesis
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Hospital Administration

By

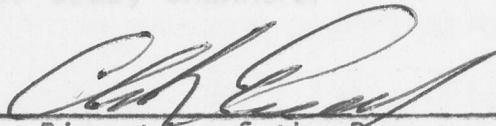
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Waco, Texas

August, 1970

APPROVED BY THE U. S. ARMY MEDICAL FIELD SERVICE SCHOOL:

ARMY HOSPITAL, FORT SILL, OKLAHOMA



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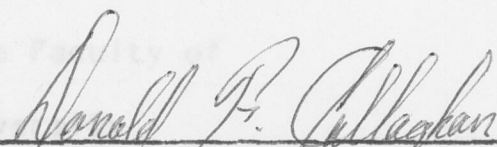
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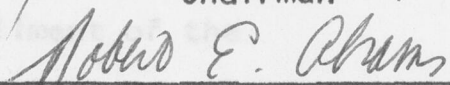
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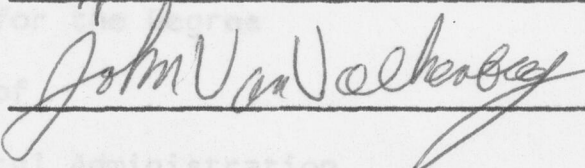
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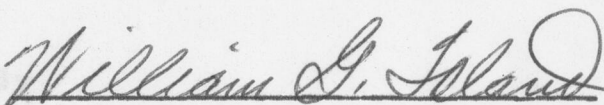


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APPROVED BY THE GRADUATE COUNCIL:



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DATE: August 18, 1970

Waco, Texas

August, 1970

ABSTRACT

LOCATION FOR AN INTENSIVE CARE UNIT, REYNOLDS
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A Problem Solving Thesis Submitted to the Faculty of Baylor
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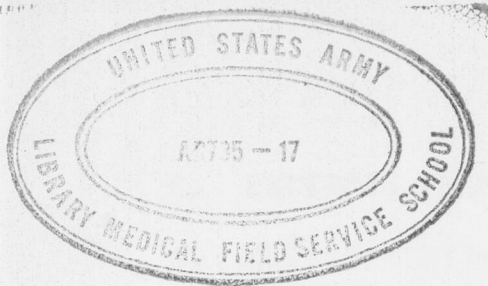
August, 1970

65 Pages

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from Stimson Library, United States Army Medical Field Service
School, Brooke Army Medical Center, Fort Sam Houston, Texas.

This paper presents the report of an analysis of
physical facilities available within the nursing units at
Reynolds Army Hospital, Fort Sill, Oklahoma. The purpose
of the study was to determine which of the existing units
was the most desirable for location of an intensive care
unit.

Functional utility and operational efficiency were
viewed from the perspective of basic concepts underlying
intensive patient care. Recommended solutions to the prob-
lem included creation of an autonomous, self-supporting
unit within an existing nursing unit.



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Historical Background of the Hospital

The first hospital to serve Fort Sill had its beginning in 1869 as an integral part of the 10th Cavalry, under the command of General Sheridan, who established Fort Sill as a base of operations against the Indians. Plans for a hospital building were initiated in 1870. When completed, in 1875, the hospital consisted of a central, two-story administration building topped by an observation tower. Ward wings were located to the east and the west of the central portion of the structure. An Apache prisoner of war hospital was constructed in 1869 and was situated to the rear of the main hospital. War Chief Geronimo was cared for in this building and died there of pneumonia on February 17, 1869.¹

During World War I, the more than 50,000 troops trained at Fort Sill were provided hospitalization in temporary buildings. These were destroyed after the war. In

¹U. S., Department of the Army, Reynolds Army Hospital, Handbook of Hospital Information (Fort Sill, Okla.: Reynolds Army Hospital, 1965).

CHAPTER I

INTRODUCTION

Historical Background of the Hospital

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¹U. S., Department of the Army, Reynolds Army Hospital, Handbook of Hospital Information (Fort Sill, Okla.: Reynolds Army Hospital, 1965).

1934, extensive alterations were made to the original hospital. This building, in addition to temporary facilities, served the hospitalization needs for the post during World War II. These facilities provided accommodations for 1,200 beds. Following the war, these same buildings, with some modification and a reduction in bed capacity, continued to serve the hospital needs of Fort Sill's population of approximately 60,000 military men and their families. Following the Korean Campaign, plans for construction of a new hospital were initiated. In 1965, a modern multistory building was completed. It was named in honor of Major General Charles Ransom Reynolds who served as Surgeon General of the Army from 1933 to 1935.

The Hospital and Its Mission

Reynolds Army Hospital accepted its first patients in September, 1965. The physical plant is a masonry structure of the block type which houses all the major medical activities of the post with the exception of troop dispensaries. Simplicity of architectural design characterizes the building throughout and has produced a compact, efficient hospital. (A photograph of the hospital appears as Appendix A.)

Support and administrative services are concentrated on the ground floor and the first floor of the building. Emergency room, outpatient clinics, and diagnostic and therapeutic areas are also situated on the first floor.

Inpatient and treatment areas are located on the second through the fifth floors. A total of 250 beds and 31 bassinets is provided for inpatient care. The building is completely air-conditioned and is equipped with modern, labor-saving equipment, such as a nurse-patient intercommunication system and installed emergency equipment in all patient areas.

Basic design of the nursing floors is of the double corridor type. Patient rooms are grouped around the perimeter of a centralized service core situated between two parallel corridors.

Four elevators are centrally located within the building; a stairwell at each end allows for additional vertical circulation of traffic. Attractive lounges for patients' visitors are situated on each floor opposite the elevators. A second patient-visitor lounge is located at the west end of each floor.

Units for specialty services are of special design in keeping with the universally accepted precept that

certain types of patients should be cared for in separate units. These units are the obstetrical and the nursery facilities located on the east end of the third floor, a psychiatric unit located on the east end of the fourth floor, a communicable disease unit located on the same floor, a pediatric unit located on the fifth floor. (See Appendix B for bed allocations by clinical service.)

The population served by Reynolds Army Hospital was estimated to be approximately 52,000 at the time of this study, May, 1966. The daily average number of beds occupied during the first seven months of operation of the new hospital ranged from a low of 102.66 in September, 1965, to a high of 145.96 in March, 1966.

The hospital's mission limits the population to be served. Persons authorized hospitalization and clinical services are, in general, concentrated within the geographical area around Fort Sill. The Table of Distribution and Allowances, the document which outlines basic organization, responsibilities, capabilities, and personnel resources for the hospital describes those who are eligible for health care as:

Active Military	27,500
Dependents of Active Military	26,300

Retired Military 3,100

Dependents of Retired
Military 3,100²

Medical care and treatment services provided for patients in clinics and inpatient accommodations may be summarized briefly as: general surgery; internal medicine; obstetrics and gynecology; orthopedics; eye, ear, nose and throat; dermatology; pediatrics; dental and oral surgery; and mental hygiene services.

The hospital is fully accredited by the Joint Commission on Accreditation of Hospitals.

Patients requiring care and treatment which is not within the capabilities of the facility are, in accordance with applicable Army regulations, transferred to a specialized treatment center which is especially equipped and staffed to provide the care needed. Brooke General Hospital, located at Fort Sam Houston, Texas, has been designated as the regional hospital to provide specialized treatment for Reynolds Army Hospital. Examples of types of diagnosis which would dictate evacuation of the patient to Brooke

²U. S., Department of the Army, Office of the Surgeon General, Table of Distribution and Allowances, Reynolds Army Hospital, Fort Sill, Oklahoma, TDA No. 4A40 5003 (Washington: U. S. Government Printing Office, March 15, 1966).

General Hospital are: severe or extensive burn injury, conditions requiring cardiac or thoracic surgery, neurological or neurosurgical conditions requiring prolonged therapy or surgery, psychiatric conditions requiring active therapy, and complicated pediatric conditions. In Brief

Shortly after Reynolds Army Hospital was opened, the commander issued a hospital regulation providing guidance for operation of the intensive care unit. (See Appendix C for excerpts from hospital policy.)

The surgical recovery room was designated to function as a combined postanesthesia recovery-intensive care unit for both medical and surgical patients. Accordingly, the unit was staffed on an around-the-clock basis with professional nurses and trained nursing assistants.

Inadequate utilization resulted in discontinuing operation of the unit at a time when the hospital was faced with a critical shortage of nursing personnel. The recovery room reverted to a postanesthesia recovery function less than a month after the combined unit was first organized.

At the time of this study, the care of acutely and critically ill patients was provided for on the individual nursing units. A continued, and at times, critical, shortage of qualified and trained nursing personnel was complicated by

CHAPTER II

THE NATURE OF THE PROBLEM

The Situation in Brief

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At the time of this study, the care of acutely and critically ill patients was provided for on the individual nursing units. A continued, and at times, critical, shortage of qualified and trained nursing personnel was complicated by

recurrent demands for special nursing of patients. Many staff members agreed that an intensive care unit might provide a solution to nursing service staffing problems created by dispersion of critically ill patients throughout the hospital. There was, however, diversity of opinion among members of the staff as to where such a unit should be located.

Statement of the Problem

The problem is to determine the most desirable location for an intensive care unit at Reynolds Army Hospital, Fort Sill, Oklahoma.

Purpose of the Project

The commanding officer of the hospital was interested in an evaluation of the desirability of reinitiating a combined surgical recovery-intensive care unit to be located in the recovery room. In the event that an objective examination of the situation revealed that the recovery room did not appear to be the most desirable location, he requested an alternate approach to concentrating all patients requiring intensive care into a common unit.

The purpose of this project is to examine the physical resources available within the hospital with the intent of evaluating patient care areas which would prove the most

functionally desirable and the most acceptable for use as an intensive care unit. This study has the further purpose of assessing possible locations in terms of potential for maximum use and optimal efficiency of operation.

Criteria

Standards to be used as a basis for arriving at a proposed solution to the problem are:

1. The basic philosophy underlying the intensive care concept. This involves focusing the hospital's resources on the patients' need for constant and skilled care and tailoring the physical facilities in accord with this need.
2. The availability of specialized equipment considered essential for coping with medical emergencies encountered in care of acutely ill patients.
3. The availability of appropriate physical facilities within the hospital.

Definition of Terms

The Army health facility is defined as a permanent type building that houses all major medical activities at an Army post. It will provide inpatient and outpatient facilities, dental clinic, and supporting services and, in most

instances, will be responsible for one or more troop dispensaries to serve personnel in the immediate area.

The Army medical treatment facility is a term used when referring to any establishment which provides health services for eligible persons. It includes, but is not limited to, hospitals.

Elements of progressive care are classifications, based upon degree of illness and care needs of patients, which serve as a basis for differentiation of hospital facilities provided. The usual terminology is self-explanatory. Levels are usually termed "intensive care," "intermediate care," and "minimal care."

Intensive care is defined as that degree of care which is required to meet the physical and the emotional needs of seriously ill patients whose conditions require constant nursing observation and attention.

An intensive care unit is defined as a common, functional area, adequately equipped and staffed, where patients are concentrated on the basis of nursing care requirements.

The seriously ill roster is an administrative report, required by Army regulations, which must be locally produced in all Army medical treatment facilities in noncombat areas. Purpose of the report is to inform the next of kin of the

condition of the patient. Determination of the patient's condition is made by the physician who submits required records for reporting or removing the patient from the list, on the basis of condition. A patient is very seriously ill when his illness is of such severity that his life is imminently endangered. He is seriously ill when his illness is of such severity that there is cause for immediate concern but no imminent danger to life.

The surgical recovery room is the room where patients are cared for immediately after surgery and prior to being returned to a nursing unit. There are two types of surgical recovery rooms. Differentiation of title is, in general, based upon degree of care and duration of stay. These are:

1. Postanesthesia unit is a room where the patient is retained only until the danger of reaction to the anesthesia is past (normally less than six hours). These rooms are normally staffed for six to eight hours during the day.

2. Postoperative unit is a room where both postanesthesia and follow-up care are provided during that period when close of intensive nursing care is required. This may be 24 to 28 hours. These rooms are staffed 24 hours a day.

CHAPTER III

STUDY OF THE PROBLEM

Facts Related to the Problem

The facts related to the problem of determining the most desirable location for an intensive care unit are:

1. The requirement to provide intensive care for patients dispersed throughout the nursing units at Reynolds Army Hospital has created the problem of dilution of available nursing resources.

2. Reynolds Army Hospital's designated mission and capabilities for providing specialized treatment will, to a great extent, determine the nature and the volume of intensive patient care requirements.

3. Personnel resources available within the hospital will be determined primarily by numbers of persons authorized by higher authority and will be influenced by the hospital's mission and documented workload requirements.

4. Original design concepts for the hospital developed during the preconstruction planning phase visualized intensive care for patients as being provided on the

individual nursing units.³ Semiprivate rooms, grouped around the nursing station on all units, are equipped with piped-in oxygen and wall-mounted suction and gas apparatus. (See Appendix B for floor plan of a typical patient room.)

5. All nursing units, with the exception of the surgical recovery room, are located on the third, the fourth, and the fifth floors of the hospital. (See Appendix B for schematic drawings of floor plans.)

6. Patient care accommodations are separated on the basis of bed allocations to the clinical services. Bed allocations within the nursing units are further segregated on the basis of sex.

7. Design criteria utilized in planning the surgical recovery room were based upon numbers of operating rooms approved for construction. Approval of five operating rooms was, in turn, based upon surgical workload criteria which indicated the volume and the type of operative procedure which could be anticipated in the future.⁴

³All information relating to design criteria and data referred to in this chapter was extracted from informal historical files assembled during the planning and the construction phases of the hospital.

⁴Surgical workload data were derived from an analysis of records of surgical procedures performed in the operating rooms of the old hospital during the year 1961. (Average operations per month: major cases, 182; minor cases, 87.)

8. The recovery room is centrally located between the operating room suite and the central materiel section. It provides specialized equipment for ten patients. Ten litters may be accommodated in the large, open area. Two cubicles for segregation or isolation of patients are situated within the unit.

9. Army policy precludes extensive modification of new construction for a minimum of one year after completion. Major changes, therefore, will not be made in the existing structural features of the hospital in the near future.

Assumptions

It is assumed that:

1. The number of patients whose condition will dictate intensive care will not be reduced. Demands for such care placed upon the hospital might become greater if requirements for medical support of troops concentrated at Fort Sill are increased.

2. Physical and personnel resources available within the hospital will not be altered to any appreciable extent in the near future.

Review of the Literature

Special units designed, equipped, and staffed to

provide intensive patient care have emerged as an accepted aspect of hospital services throughout the country during the past decade. Reasons for this trend, as cited by the editors of Modern Hospital, are "unpretentious and logical--it simply makes good sense to assemble into one unit specialized equipment and nursing personnel to help patients who require skilled care."⁵ A further comment from the same source indicates that the Joint Commission on Accreditation of Hospitals solidly supports the concept of the intensive care unit.

The practice of concentrating sick patients into a common area so as to insure visual and auditory control by the nurse has existed on an informal basis for many years. Busy nurses, responsible for large wards, have traditionally grouped patients who needed the most attention and observation close to the nursing station. The practice remains, today, as a basic tenet of effective ward management. Efficient staff nurses subconsciously evaluate the nursing care needs of patients, and they determine bed location on that basis.

Nor is the concentration of medical resources and

⁵"How to Provide the Best Intensive Patient Care," Modern Hospital, C, No. 1 (January, 1963), 67.

staff where the greatest need exists a novel approach to the Army Medical Service. Indeed, the philosophy fundamental to all medico-military care is that it is carried out by echelons. "To carry out the correct procedure at the appropriate time and in the appropriate facility is an inviolate rule of military medicine. In no other way can the most effective care be provided."⁶

Acceptance of the efficiency and the logic of grouping postoperative patients into a common functional area, where the operation of intensive care units was evaluated, actuated by acute shortages of nurses, gained in popularity among civilian hospitals during World War II. A surgical recovery room is now accepted as an essential aspect of patient care. It has served as the model for intensive care units.

Some hospitals view the intensive care unit as an extension of the recovery room, with surgical patients predominant.⁷ Control is often under the chief of surgery or the chief of anesthesia. Many small hospitals, as a matter

⁶U. S., Department of Defense, Emergency War Surgery NATO Handbook (Washington: U. S. Government Printing Office, 1958), p. 2.

⁷Theodore T. Jacobs, "Organizing and Operating an Intensive Care Unit," Hospitals, XXXIX, No. 19 (October 1, 1965), 70.

of economy as well as efficiency, combine the unit with a postanesthesia unit. Larger hospitals have often situated the intensive care unit adjacent to the surgical suite but separated from surgical recovery facilities.

Dr. John Kinney, a surgeon, has pointed out:

Considerable thought should be given to the relationship of the intensive care unit to other units. If it is in close proximity to post-anesthesia recovery room it may be limited to surgical patients.⁸

A summary report from several California hospitals where the operation of intensive care units was evaluated has supported Dr. Kinney's observation.⁹ The author states that an intensive care unit should not be planned as part of a postanesthesia unit. It should be separate with the capability of caring for medical, as well as surgical, cases. Factors considered important in planning the physical facilities for a unit are: provision of isolation facilities as an integral part of the unit, provision of maximal privacy for acutely ill patients, availability of adequate work space and storage area, central location of nursing station with

⁸John M. Kinney, "Report of Sessions of the Clinical Congress, American College of Surgeons, Chicago, 1964," Hospital Topics, XLIII, No. 1 (January, 1965), 102.

⁹Ralph E. Adams, "Intensive Care Research," Part II, Canadian Hospital, XL, No. 1 (January, 1964), 62.

maximum visual control of patient beds, installation of oxygen and suction equipment, and location away from high traffic areas but convenient to support and service facilities. These factors closely parallel essential physical resources recommended by others reporting experiences with intensive care unit planning.

A report of a study to estimate the requirements for an intensive care unit at John Gaston Hospital, Memphis, Tennessee, considered the ideal method to be one which is based upon the average ratio of acutely ill patients to total hospital population. Demands for care could be expected to be equivalent to 5 per cent of bed capacity.¹⁰

Methods for determining numbers of beds described in many recent articles are based upon standards set forth by the Public Health Service.¹¹ Faye G. Abdullah, a nurse consultant who worked closely with Dr. Jack Haldeman in studies which establish the basis for these currently accepted

¹⁰William H. Dornette and Robert L. Durbin, "Design and Construction of an Intensive Care Facility," Part I, Hospital Management, XCI, No. 2 (February, 1961), 36.

¹¹U. S., Department of Health, Education, and Welfare, Public Health Service, The Progressive Patient Care Hospital--Estimating Bed Needs, PHS Pamphlet No. 930-C-2 (Washington: U. S. Government Printing Office, 1963).

standards, comments that:

... [the] concept of progressive patient care postulates that organization of facilities, services and staff must be based upon known patient needs which should be evaluated. This presupposes that there is a mechanism for classification of patients on a twenty-four hour basis.¹²

The patient's need for nursing care as a criterion for admission to an intensive care unit is fairly well demonstrated in current literature. Public Health Service methods for estimating beds for this unit are based upon a preliminary evaluation of care needs of the patient census. This method recommends, as well, that this evaluation be continued over a prolonged period of time.¹³

A review of available literature fails to reveal a similar study concerned, primarily, with where to locate the unit in a new hospital after construction has been completed. Most cases reported appear to focus upon problems of fitting the unit to the hospital's need for designing it in accord with the policies and the program of therapy. Acceptance of guidelines developed by the Public Health Service appears to

¹²Faye G. Abdullah, "Progressive Patient Care--A Challenge for Nursing," Hospital Management, XXCIX, No. 6 (June, 1960), 135.

¹³The Progressive Patient Care Hospital--Estimating Bed Needs, op. cit., p. 3.

be fairly widespread. The pamphlet Elements of Progressive Patient Care¹⁴ is frequently referred to in articles related to planning and locating a unit. It appears to be the most widely acknowledged and most authoritative source of information presently available on the subject of intensive care planning.

As defined in this reference, intensive care, the initial element of progressive patient care, is:

. . . for critically and seriously ill patients who are unable to communicate their needs or who require extensive nursing care and observation. These patients are under close observation of nurses who have been selected because of their special skills, training and experience. All necessary equipment, drugs and supplies are immediately available.¹⁵

These guidelines advocate specially designed and organized units planned to provide maximum ease and safety of care for patients.

Location of the unit, where specific reference is made to this consideration, appears to be affected by various situational elements. Generally, influencing factors are efficiency of operation, effective staffing, and selection

¹⁴U. S., Department of Health, Education, and Welfare, Public Health Service, Elements of Progressive Patient Care, PHS Pamphlet No. 930-C-1 (Washington: U. S. Government Printing Office, 1962).

¹⁵Ibid., p. 17.

of an area which meets with acceptance of the medical staff. One article states: "Location within the hospital ideally should be nearest the service which provides the greatest workload."¹⁶

An elementary "workable hypothesis" for developing intensive care units is suggested by a hospital architect:

That (1) it is established that better hospital care is needed for certain patients in acute wards; (2) one way to provide that care is to make it easy for all who serve patients to perform their tasks; (3) physical planning should emphasize ease of care for the patient.¹⁷

In a further observation, he advises the planner to consider making the intensive care facility part of another nursing unit.

There seem to be no universally applicable guidelines which can be applied in planning the location for an intensive care unit. This obvious guideline evolves, however, from a review of the literature: any solution should be based upon careful analysis of the situation as it exists within the individual hospital.

¹⁶Max S. Sandove, James Cross, Harry G. Higgins, and Manuel Segall, "The Recovery Room Expands Its Service," Modern Hospital, XXCIII, No. 5 (November, 1964), 69.

¹⁷E. Todd Wheeler, "Report of Sessions of the Clinical Congress, American College of Surgeons, Chicago, 1964," Hospital Topics, XLIII, No. 1 (January, 1965), 103.

Approach to the Problem

Efforts to gather information for this study were focused upon:

1. Observation of the hospital's nursing units.
 2. Impressions received from members of the hospital staff.
 3. Appraisal of available, pertinent records and reports.
- Informal interviews were held with the commanding officer, the executive officer, the chiefs of medicine and surgery, and the chief nurse. Discussions with other members of the medical and the nursing staffs contributed further information. Observations from other physicians and nurses who have had experience with this aspect of patient

care were also a valuable source of information. It is utilized as a method of documenting nursing workload and in estimating nurse staffing requirements. (See Appendix D for excerpts from Army Patient Classifications, Category I, Intensive Care.)

Patient categorization had not been used at Reynolds

¹⁸ Esther Claussen, Maj., U.S.A., "Categorization of Patients According to Nursing Care Needs," Military Medicine, XVI, No. 3 (March, 1955), 309.

Army Hospital for some time. For this reason, it was not possible to determine, with a degree of sensitivity, the hospital's requirement to provide intensive care.

CHAPTER IV

SOLUTION OF THE PROBLEM

There was a consensus among physicians who were questioned that the serious Discussion (see Definitions)

The demand for patient services placed upon the hospital will directly influence the utilization of physical resources available within the hospital. It seemed necessary, therefore, to make a preliminary assessment of the demand for intensive care at Reynolds Army Hospital in order to evaluate the problem of where to locate the unit.

As cited earlier, accepted procedures for planning for an intensive care unit involve an evaluation of the patient census based upon care requirements. A similar method of patient classification was developed by the Army Medical Service several years ago.¹⁸ It is utilized as a method of documenting nursing workload and in estimating nurse staffing requirements. (See Appendix D for excerpts from Army Patient Classifications, Category I, Intensive Care.)

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¹⁸Esther Claussen, Maj., U.S.A., "Categorization of Patients According to Nursing Care Needs," Military Medicine, XVI, No. 3 (March, 1955), 209.

Army Hospital for some time. For this reason, it was not possible to determine, with any degree of sensitivity, the hospital's requirement to provide intensive care.

There was a consensus among physicians who were questioned that the seriously ill rosters (see Definitions) should provide an accurate estimate of patient requirements for intensive care. Nurses, however, voiced a different opinion. Individual concepts and definitions of intensive care might reveal the source of this diversity. An example of a comment taken from a publication dealing with nursing might serve to illustrate that how one defines the term could be an influencing factor. In discussing the use of seriously ill rosters rather than patient classification as a tool for determining nursing staffing, the writer states:

Here one must recognize that the classification of patients is used to determine nursing needs. These needs are influenced by the patients' diagnosis and prognosis but are not always affected by the administrative classification of seriously ill.¹⁹

The Army's method of patient classification is based upon the following factors: nursing procedural requirements

¹⁹U. S., Department of the Army, Brooke Army Medical Center, Medical Field Service School, Nursing Service in the Army, Special Text 8-150 (Fort Sam Houston, Tex.: Medical Field Service School, 1963), p. 195.

and patients' physical restrictions, emotional needs, and instructional needs. Since these classifications were not available, seriously ill rosters were checked. Information extracted from rosters dating from the first day of October, 1965, through the last day of April, 1966, revealed the following information:

1. Numbers of patients classified as seriously ill ranged from a high of twelve on April 12, 1966, to a low of two on February 10, 1966.

2. Daily average number of seriously ill was 6.48.²⁰

3. Daily average number of seriously ill adults and children was 5.48.

4. Exclusive of newborn infants, a total of 74 patients was classed as seriously ill during the seven-month period.

5. Patients were retained in this status for varying periods of time ranging from a matter of hours to seven

²⁰This average includes numbers of premature newborns delivered during that period of time. Hospital policy requires that all newborn infants weighing five pounds or less at birth must be classified with seriously ill patients. Although these infants do require intensive care, they are not considered as candidates for an intensive care unit. The newborn nursery is staffed and equipped to provide specialized care.

months. Examples of such variation are:

(a) A patient on Ward 4 West. Diagnosis: possible pulmonary embolism. This patient expired within a matter of hours after admission. It may safely be assumed that he required intensive care during that time.

(b) A patient on Ward 5 West. Diagnosis: metastatic carcinoma. This man originally was placed on the list on October 9, 1965. He was still carried on the roster at the time of the study, May, 1966.

A precise determination of exact times when patients were placed on or removed from the seriously ill roster was not possible.

6. An evaluation of diagnoses of the total 74 patients (63 adults, 11 children) classified as seriously ill revealed that the majority of these patients suffered from medical conditions. An analysis of diagnoses by service revealed:

(a) Medical service--40. All patients were assigned to wards 4 West and 4 East.

(b) Surgical service (includes gynecology and orthopedics)--23. All patients were assigned to Ward 5 West.

(c) Pediatrics--11. All patients were assigned to Ward 5 East. This total included 8 medical and 3 surgical conditions.

7. The single, most commonly encountered diagnosis involved heart conditions. A total of 20 seriously ill patients suffered from coronary disease. As listed on the seriously ill rosters, these diagnoses were variously described as acute coronary, heart attacks, heart failure, and acute myocardial infarction. It is entirely reasonable to assume that some degree of intensive care and, possibly, lifesaving procedures were required for these patients.

8. The second most commonly encountered condition was CVA (cerebro-vascular accident). While commonly classed as suffering from a neurological condition, all of these patients were cared for by the medical service at Fort Sill.

9. A total of 10 adults and children was classified as seriously ill during that period of time when the recovery room functioned as a combined postanesthesia-intensive care unit. Only three of these were admitted or transferred to the unit. Others were retained on wards 4 West, 5 West, and 5 East.

It was not possible to obtain specific details regarding utilization of the recovery room unit for postanesthesia care inasmuch as a patient log, or register, was not maintained. Local practice at the time of this study was explained as follows: All patients, regardless of type of

surgical procedure performed or anesthesia administered, were returned from the operating room to the recovery room; all patients were transferred back to their assigned wards prior to 4:30 P.M.; surgical emergencies occurring between 4:30 P.M. and 7:00 A.M. were provided postanesthesia recovery care on the surgical ward, 5th floor.

Information taken from the 24-hour nursing service reports indicated that a daily average number of all patients cared for in recovery room was 8.08 for the 6-month period October, 1965, to April, 1966. Diagnoses listed indicated that the majority of cases involved generally uncomplicated surgical procedures.

The 24-hour nursing service reports were examined in an attempt to estimate the number of special nursing hours provided for patients. Complete and accurate information was not obtainable inasmuch as members of the assigned unit staff are frequently given this duty when it is deemed essential to observe a patient closely. Some information was available as special nurses or attendants are sometimes ordered by the physician. These demands are filled from the assigned unit staff or, if necessary, by borrowing from another, less busy nursing unit. With full recognition of the fact that the following data represent the exception rather than the rule,

they are presented as an illustration of demands for intensive nursing care which do occur. During the two-week period April 24 through May 7, 1966, immediately prior to and during the period of this study, a total of 400 hours of special duty nursing was required for patients on wards 4 West, 5 West, and Pediatrics. Demands filled from among the assigned staff were equal to 50 ordinary duty days (8 eight hours each). Care was provided by the following categories of personnel:

	<u>Total Hours</u>	<u>Total 8-hour Days</u>
Registered Nurse	152	19
Licensed Practical Nurse	64	8
Trained Assistant	<u>184</u>	<u>23</u>
TOTAL	<u>400</u>	<u>50</u>

Informal discussions with members of the medical and the nursing staffs disclosed one common objection to the combined postanesthesia recovery-intensive care unit. It is geographically isolated from other nursing units. Location of the recovery room on the second floor caused staffing problems when the unit remained open on an around-the-clock basis. In order to staff the unit on a 24-hour a day, 7-day a week basis, a minimum of 4.3 registered nurses and 5 trained assistants was required. These persons could not be

made available to supplement staffing needs on busy nursing units even though there might have been only a single patient in the intensive care unit. On the other hand, geographical isolation from other nursing units, particularly during the nighttime hours, created the problem of providing prompt assistance to the intensive care unit in event of emergency.

Other comments concerned with the undesirability of the unit were focused upon limitation of visiting privileges for patients' families, possible adverse psychological reaction of critically ill patients in a surgical recovery area, and lack of privacy for patients in the room.

Medically oriented physicians were, in all cases, opposed to providing care for patients suffering from serious medical conditions in a large open ward. They generally approved a special area, appropriately designed, equipped, and staffed to cope with medical emergencies. They were adamant, however, in their objections to a combined surgical recovery-intensive care unit. These medical doctors stressed skilled nursing observation and judgment as an essential and vital aspect of care for the patient with a serious cardiac condition. Stability of staff was considered to be an important element in quality of care for these patients. These opinions are in accord with current thinking as reflected in

professional literature.²¹ The need for a special coronary care area within the hospital or within the intensive care unit has become increasingly more apparent in recent years. Provisions for privacy and quiet for the patient and for highly skilled, continuous nursing observation are unanimously recommended.

Medical versus surgical orientation of both doctors and nurses appeared to influence opinions to some degree. There were, however, several areas of common agreement. These were:

1. The dilution of available nursing resources where special nursing was ordered for patients dispersed throughout the hospital was an important factor influencing the need for an intensive care unit.

2. The recovery room was not a desirable location for the intensive care unit because of geographical isolation from other nursing units.

3. Location of the intensive care unit in the surgical recovery room would result in limited utilization of

²¹U. S., Department of Health, Education, and Welfare, Public Health Service, A Facility Designed for Coronary Care, PHS Publication No. 930-D-19 (Washington: U. S. Government Printing Office, May, 1965).

the unit for medical patients.

4. The majority of patients requiring intensive care was medical rather than surgical.

All nursing units were evaluated in terms of the basic criteria developed to provide guidelines for arriving at a solution to the problem. Specific considerations which will, to a great extent, influence selection of an intensive care unit are as follows:

1. The availability of physical resources generally considered to be essential for provision of intensive patient care:

(a) The physical location must be large enough to accommodate peak demands, yet flexible enough to respond to variations in patient census.

(b) Specialized equipment essential for coping with medical emergencies and for meeting nursing care needs of the seriously ill patient must be readily available within the area selected.

(c) Accommodations for segregating patients with infectious or communicable conditions must be available within the area.

(d) Provisions should be available for providing some privacy for all patients and maximum privacy for certain

types of patients. control of all beds.

(e) Provisions should be made for families of the seriously ill to visit with patients. Partitions are of the

half-glass. (f) Since extensive renovation is not possible, the structural limitations of the area must be considered.

2. Finally, since physical facilities and special equipment are useless unless the services of qualified physicians and skilled nurses are also provided, this aspect cannot be ignored. Possible locations for the intensive care unit must be assessed in terms of potential for maximum utilization, optimum efficiency of operation, and most effective utilization of nursing personnel to provide safe patient care.

ices insures ready availability of emergency equipment.

A Descriptive Comparison of Possible Locations for the Intensive Care Unit

I. Recovery room on on the second floor makes the inten-

A. Location--second floor, central to surgical suite and central material section. staffing.

B. Advantages--ility of staffing is present with ex-

pected fluct. 1. Specialized equipment required for intensive care of patients (10 wall-mounted oxygen, suction, and blood pressure apparata) is available. Noninstalled resuscitative equipment is readily available from surgery.

2. Design of the unit allows for optimum vents.

auditory and visual control of all beds.

3. Provisions for segregation of two patients are available in partitioned cubicles. Partitions are of the half-glass type.

4. Space is adequate to accommodate ten patients in semisegregated (curtained) areas within a large open ward.

5. Service facilities are well planned and adequate and are concentrated within the immediate vicinity of the nursing station.

6. Communication facilities are adequate.

7. Storage area for supplies required is adequate.

8. Proximity to surgery and central supply services insures ready availability of emergency equipment.

C. Disadvantages--

1. Location on the second floor makes the intensive care unit isolated from other nursing units and consequently affects continuity of staffing.

2. Inflexibility of staffing is present with expected fluctuations in occupancy.

3. Limitations on visiting privileges for families of patients are necessary. A visitors' lounge is not available in the vicinity.

4. Lack of privacy for critically ill patients

is present with possibility of adverse psychological effects for these patients during times of peak loads of postanesthesia recovery.

II. Ward 5 West

A. Alternative--A group of semiprivate rooms located to one side of the nursing station. (Rooms 526 through 531--a total of 10 beds.)

1. Advantages--

(a) All rooms are equipped with installed, wall-mounted oxygen and suction equipment and nurse-patient intercoms.

(b) All rooms have an adjoining private toilet and a sink.

(c) Two of the rooms (530 and 531) are designed especially for isolation of patients and are equipped with a subutility room as well as a private toilet and sink.

(d) All rooms, except the isolation rooms, can accommodate two beds or may be used as private rooms by removing one bed.

(e) Two rooms (526 and 527) are directly opposite the nursing station.

(f) Supplies and movable equipment may be stored within the area for ready availability to rooms.

(g) This location, part of another nursing unit, would allow for flexibility in staffing during periods of low demand for intensive care.

(h) Sufficient beds remaining on the unit would allow for easy transfer of patients when their care needs are lessened.

(i) This location would assure safer postanesthesia care for patients treated on an emergency basis when the recovery room is not operational.

(j) This location would allow for visiting privileges for families of patients. Two attractive, comfortable lounges are available on the floor.

2. Disadvantage--There is limited visual and auditory control of patients in semiprivate and private rooms.

IV. B. Alternative--A group of rooms located on either side of the nursing station. (Rooms 537-538-527-528 and 530-531--a total of 10 beds.)

1. Advantages--Alternative B has all the advantages of Alternative A, and, in addition:

(a) Would allow for easier access to patient rooms from the nursing station and the service areas.

(b) Would allow for segregation of males and females.

2. Disadvantages--All the disadvantages of Alternative A exist, and, in addition:

It would preclude concentration of patients into a common area for purposes of most efficient utilization of staff.

III. Ward 4 West

The basic floor design is identical to that of Ward 5 West. Disadvantages are the same as those for both Alternative A and Alternative B. Advantages are also the same, with this exception: Specialized equipment for providing resuscitative care in cardiac emergencies and for monitoring coronary patients is available on the ward. There is also a continuing program for the ward nursing staff in use of this equipment and in nursing care of the cardiac patient.

IV. Ward 3 West

Ward 3 West was not considered as a possible area as there are no specially designed isolation units on this floor. It is, as well, situated next to the obstetrical unit, a factor which might limit flexibility in staffing.

Units specially designed for clinical specialties, such as psychiatry and pediatrics, were not considered as acceptable locations for an intensive care unit.

Summary

In summary, the omission of a specially designed, functional intensive care unit in the new Reynolds Army Hospital has created problems of effective nurse staffing and has limited the hospital's capability to provide high-quality, safe standards of care for patients.

Evaluation of hospital records and reports reveals that the majority of patients who have required special, constant, skilled medical and nursing care into a common area around-the-clock care have had medical diagnoses with cardiac conditions.

Assessment of available, appropriate physical facilities indicates:

1. The geographically isolated surgical recovery room is not a desirable location for an intensive care unit. It fails to meet with acceptance from staff physicians and compromises efficient utilization of nursing resources throughout the hospital.
2. Adequate private and semiprivate patient rooms are available on both Ward 5 West, the surgical nursing unit, and Ward 4 West, the medical nursing unit. The basic, double corridor design on these wards would allow for selection of an area where the intensive care unit might function in an independent manner.

3. Ward 4 West would provide the most desirable location. Cardiac resuscitative and monitoring equipment is available, and the ward staff has been trained in its use as well as in specialized cardiac nursing techniques.

Conclusion

The most desirable location for an intensive care unit is Ward 4 West. Concentration of patients requiring constant, skilled medical and nursing care into a common area on this existing unit meets the previously established standards. Selection of this location, the medical ward, would also place the unit where the greatest workload exists.

Recommendations

The following recommendations are made in order to implement the conclusion that the intensive care unit should be located on Ward 4 West:

1. The area selected should encompass a group of rooms located in close proximity to the nursing station and situated in a common grouping on one side of the corridor.

(See Appendix E for a diagram of the proposed area.)

2. Specific recommendations for selection of beds located within this area are that:

- a. Certain rooms should be designated as

intensive care rooms--the four semiprivate rooms numbered 426 through 429 and the two isolation rooms numbered 430 and 431.

b. Some beds, located in rooms adjacent to the intensive care rooms, should be reserved as flexible beds for patients who require a high level of care if not intensive care.

c. A special room should be reserved and equipped as a coronary care room. This room, ideally, should be Room 426, the one most readily available to the nursing station.

APPENDIX 4

PICTURE OF REYNOLDS ARMY HOSPITAL

FORT STILL, OKLAHOMA

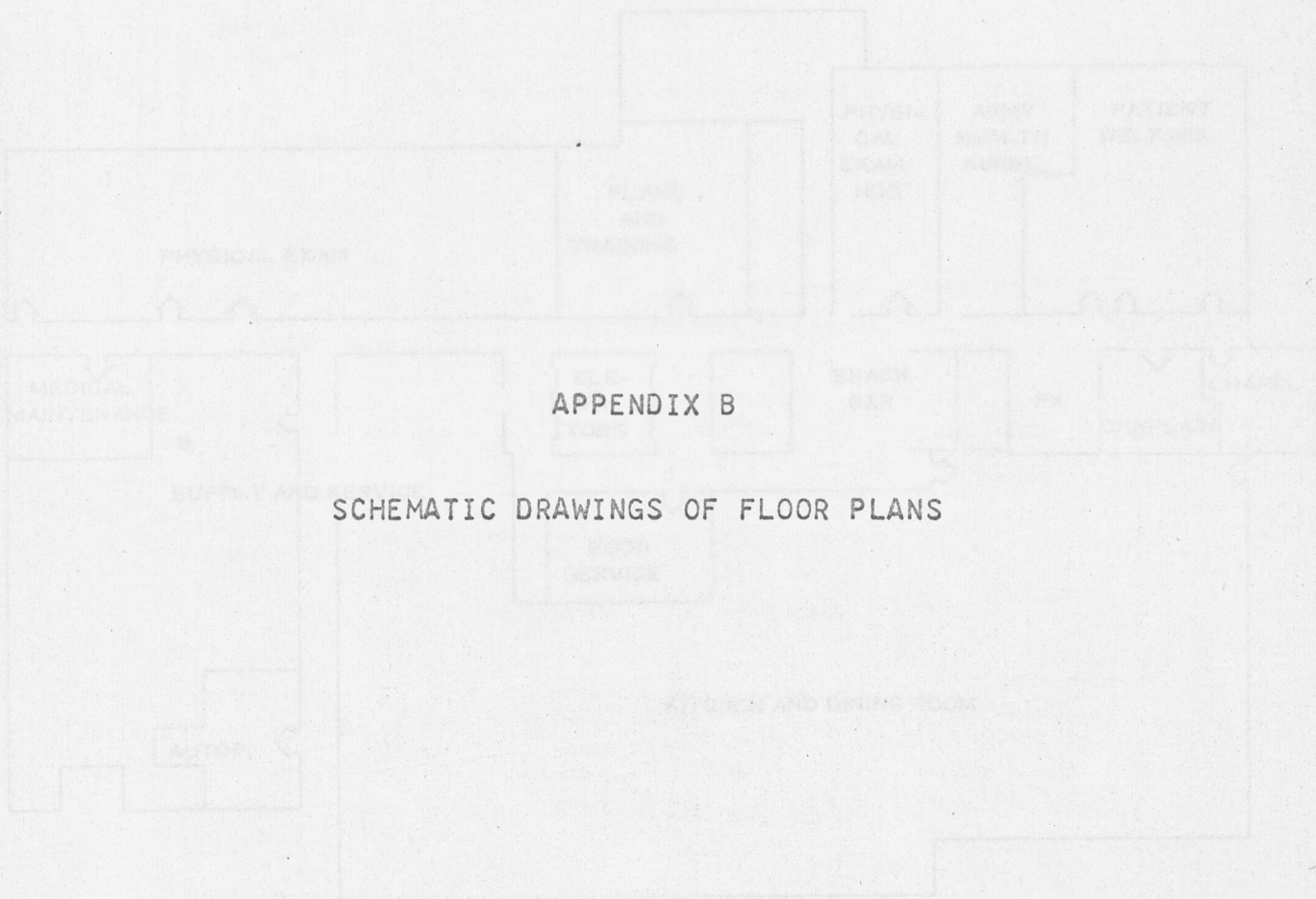
APPENDIX A

PICTURE OF REYNOLDS ARMY HOSPITAL

FORT SILL, OKLAHOMA



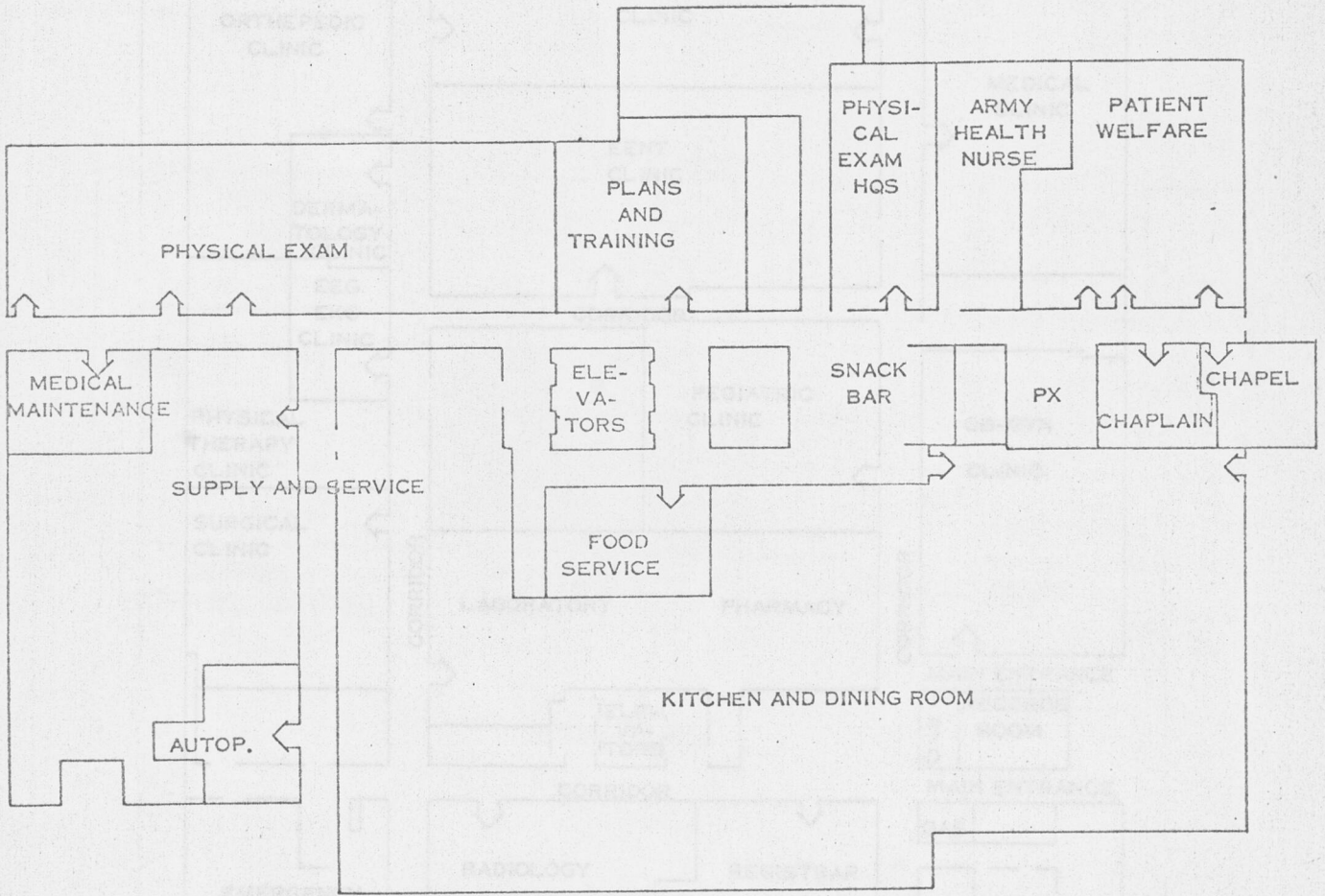
GROUND FLOOR, REYNOLDS ARMY HOSPITAL



APPENDIX B

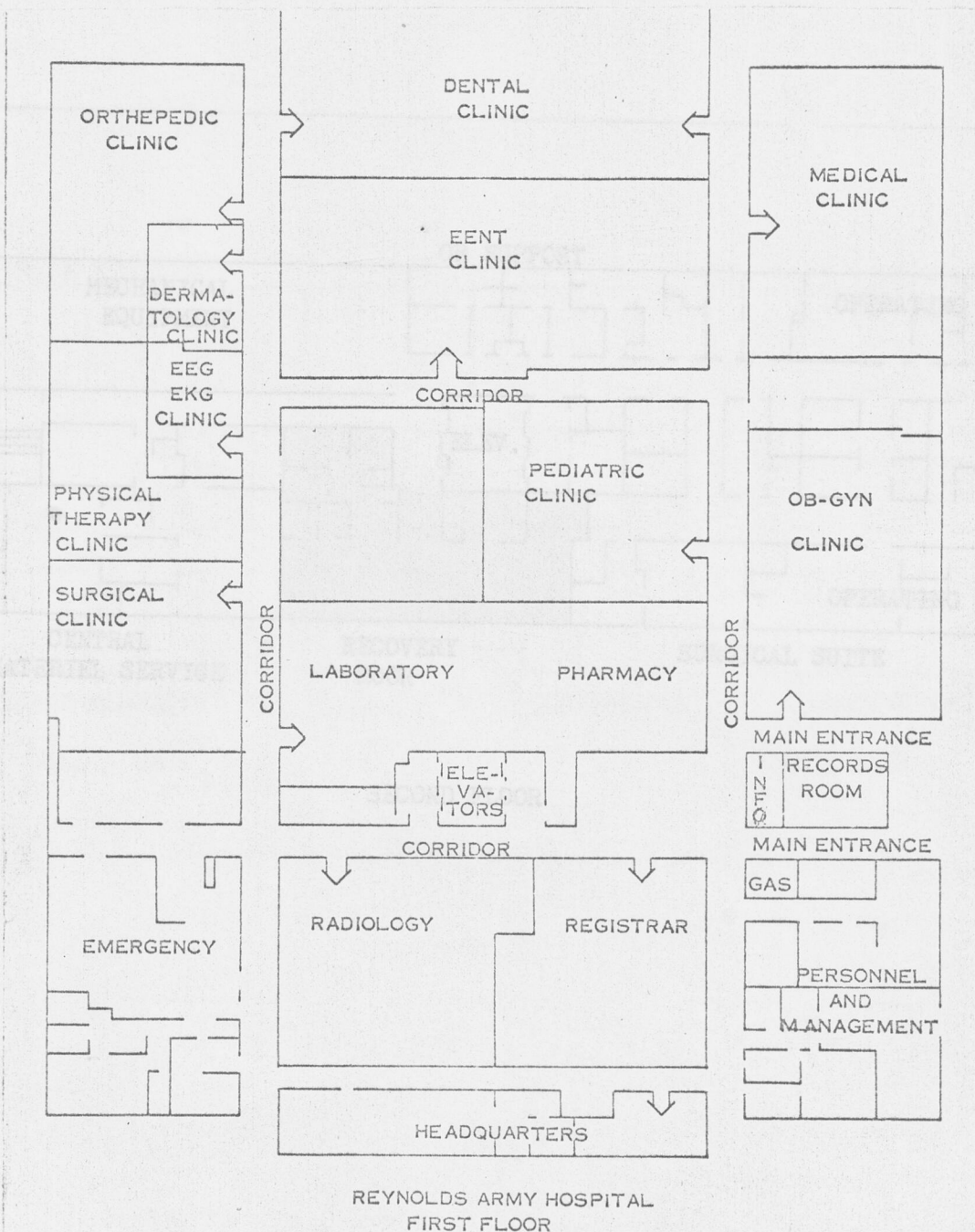
SCHEMATIC DRAWINGS OF FLOOR PLANS

GROUND FLOOR, REYNOLDS ARMY HOSPITAL

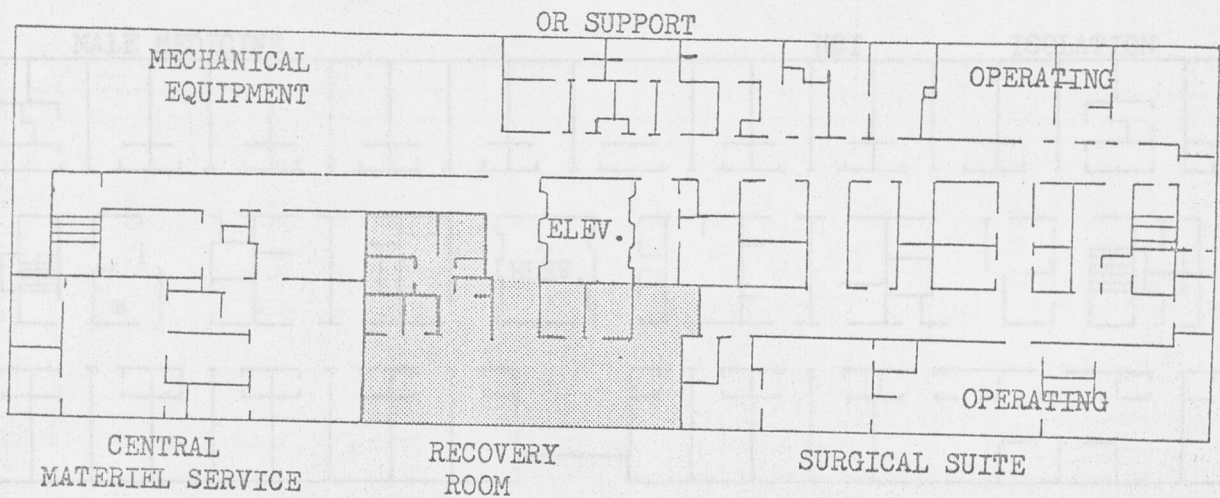


REYNOLDS ARMY HOSPITAL
GROUND FLOOR

FIRST FLOOR, REYNOLDS ARMY HOSPITAL

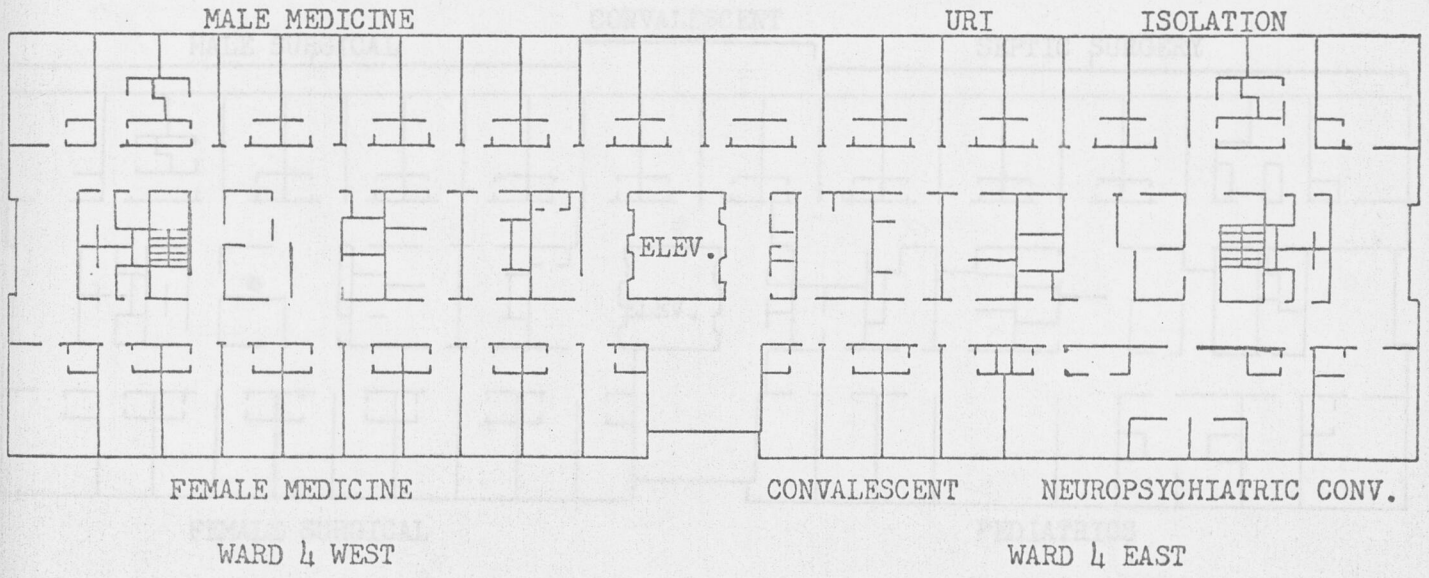


SECOND FLOOR, REYNOLDS ARMY HOSPITAL



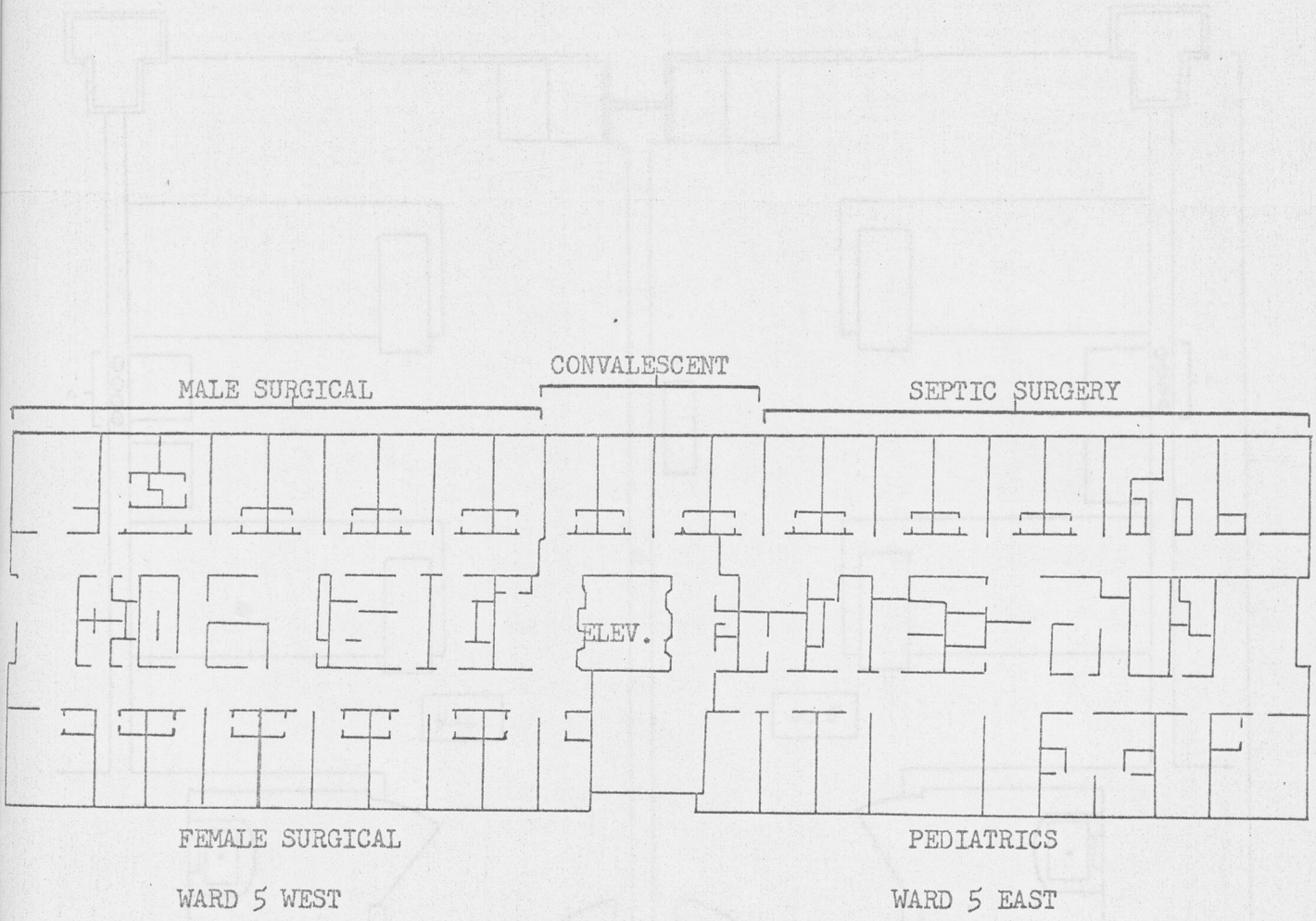
SECOND FLOOR

FOURTH FLOOR, REYNOLDS ARMY HOSPITAL



FOURTH FLOOR

FIFTH FLOOR, REYNOLDS ARMY HOSPITAL



FIFTH FLOOR

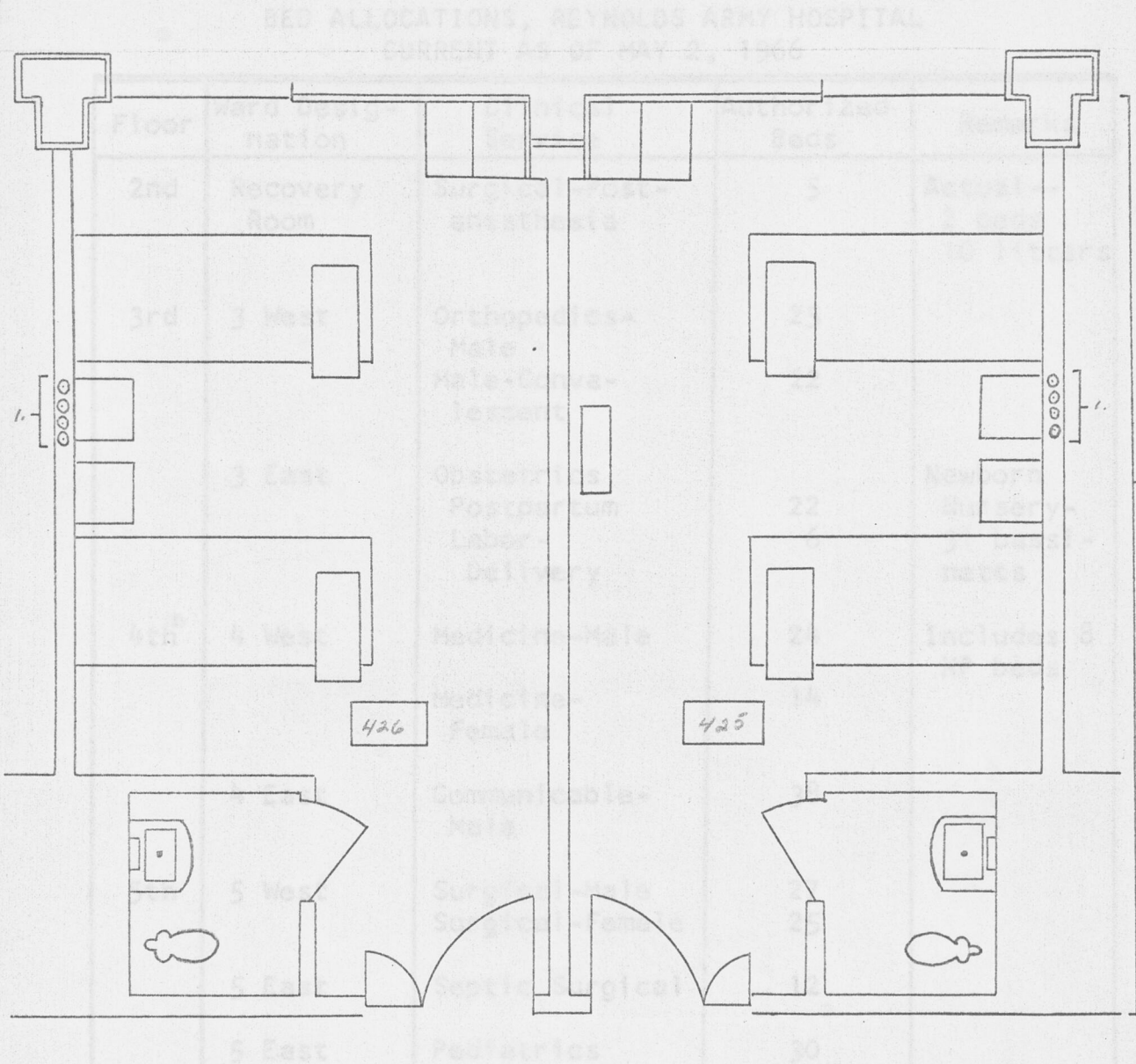
FLOOR PLAN: SEMI-PRIVATE ROOMS, EQUIPPED FOR INTENSIVE CARE
REYNOLDS ARMY HOSPITAL

SCALE: 1/4" = 1'

ROOM DIMENSIONS: 11' x 21'

LEGEND: 1--INSTALLED EQUIPMENT
O² = SUCTION

FLOOR PLAN, PATIENT ROOM-INTENSIVE CARE



FLOOR PLAN: SEMIPRIVATE ROOMS, EQUIPPED FOR INTENSIVE CARE
REYNOLDS ARMY HOSPITAL

SCALE: $1/4" = 1'$

ROOM DIMENSIONS: $11' \times 21'$

LEGEND: 1--INSTALLED EQUIPMENT
O₂ + SUCTION

BED ALLOCATIONS, REYNOLDS ARMY HOSPITAL
CURRENT AS OF MAY 2, 1966

Floor	Ward Designation	Clinical Service	Authorized Beds	Remarks
2nd	Recovery Room	Surgical-Post-anesthesia	5	Actual-- 2 beds 10 litters
3rd	3 West	Orthopedics-Male	25	
		Male-Convalescent	22	
	3 East	Obstetrics Postpartum Labor-Delivery	22 6	Newborn Nursery- 31 bassinets
4th	4 West	Medicine-Male	24	Includes 8 NP beds
		EXCERPTS Medicine-Female	14	
	4 East	Communicable-Male	38	
5th	5 West	Surgical-Male	27	
		Surgical-Female	25	
	5 East	Septic Surgical	12	
	5 East	Pediatrics	30	
TOTAL			250	

decisions will be decided by the Chief, Operative and Anesthesia Section, on whether the patients are medical, surgical, or other. asking for permission by the immediately attending physician for admission of such patients. INTENSIVE CARE UNIT¹ the area should be informal, usually automatic on the attending physician's request, and disagreement should be rare.

POLICY ON RECOVERY ROOM-
INTENSIVE CARE UNIT¹

1. Purpose. To establish policies for the operation of the Recovery Room-Intensive Care Unit.

2. General. If there is reason for final policy decision, or if a case demands an arbitrator because of disagreement, refer to the Chief of the Department of Surgery.

a. With few exceptions, there will be no visiting of routine recovery patients unless they are on the Seriously Ill List.

b. Upon the approval of the doctor in charge of the patient and the nurse in charge of the Recovery-Intensive Care Unit, the immediate family, i.e., the father and mother of a child, or the wife or husband, or son or daughter over 12, or nearest relative will be allowed to visit. The length of time should be as brief as possible, and should be conducted in such a manner as to avoid disturbance of any of the other patients, or interfere with the nurses' or doctors' care of other patients in this unit. Ordinarily only one visitor at a time will be allowed.

c. Visitors will wear operative gowns and masks.

d. The Hospital Chaplain will be allowed the freedom of visitation of the Recovery-Intensive Care patients. Additional military and non-military clergymen are allowed in this area if requested by the patient or his family if the patient is unable to decide. The visiting Chaplains in such cases must gown and mask like any other visitor from outside the hospital.

e. Which patients can be admitted to the Recovery-Intensive Care Ward, when they will not be admitted, how long they will stay, when they leave, and other such

¹Excerpts from "Hospital Policy on Recovery Room-Intensive Care Unit," Reynolds Army Hospital, Fort Sill, Oklahoma, October 15, 1965.

decisions will be decided by the Chief, Operative and Anesthesia Section, no matter whether the patients are medical, surgical, or other type patients. Routine asking for permission by the immediately attending physician for admission of such patients, length of stay, and time of discharge from the area should be informal, usually automatic on the attending physician's request, and disagreement should be rare, just as cooperation is essential.

f. When there is reason for final policy decision, or when occasion demands an arbitrator because of disagreement, referral will be to the Chief of the Department of Surgery who has final authority, although the Chief of the Operative and Anesthesia Section will be directly in charge and responsible for and to the Chief, Department of Surgery for administering these policies in this area.

g. These are general rules, and exceptions are to be made for humane reasons at the attending physician's discretion, such as when the patient is not expected to recover, or for example, when recovery might be aided by a mother being allowed to feed a badly burned child with poor intake.

4. Action by Registrar or Administrative Officer of the Day. The Registrar or AOD will notify the person listed on the form as emergency addressee, by the most expeditious means; the appropriate Chaplain and other interested agencies as indicated on the form, entering time of notification of each.

Excerpts from "Hospital Policy on Seriously Ill Patients," Reynolds Army Hospital, Fort Sill, Oklahoma, September 15, 1965.

POLICY ON SERIOUSLY ILL PATIENTS¹

1. Purpose. To establish a policy and procedure in reporting of seriously ill patients.

2. General. The Ward Officer immediately responsible for the care of the patient will ordinarily determine when an individual's condition is such that he should be considered seriously ill. The Chief of Section or Service will be called upon to render all necessary advice or assistance, and to insure that such determination is proper.

3. Reporting Procedures of Seriously Ill Patient. When it has been determined that a patient is seriously ill, the responsible ward officer or the appropriate Medical Officer of the Day will, at the time the decision is made, initiate DA Form 8-168 "Report of Seriously Ill Patient," by filling in spaces 1 to 10, inclusive. The report will be prepared in duplicate. Both copies will immediately be hand-carried to the Registrar, except during other than normal duty hours, in which case both copies will immediately be delivered to the AOD for necessary action. The Registrar will take action indicated in paragraph 4 below, and will deliver the duplicate copy to the Commanding Officer. The original will be filed with the patient's Clinical Record. The AOD will complete the report as indicated in paragraph 4 below, and will deliver the original to the Registrar just prior to his being relieved from that day's AOD duty. The duplicate copy will be attached to the AOD Report.

4. Action by Registrar or Administrative Officer of the Day. The Registrar or AOD will notify the person listed on the form as emergency addressee, by the most expeditious means; the appropriate Chaplain and other interested agencies as indicated on the form, entering time of notification of each.

¹Excerpts from "Hospital Policy on Seriously Ill Patients," Reynolds Army Hospital, Fort Sill, Oklahoma, September 15, 1965.

5. Ward Records on Seriously Ill Patients. Each ward will maintain a list of its seriously ill patients available to the MOD upon his request when making rounds. The patient's clinical records and nursing notes will be readily accessible at the nursing station.

6. Maintenance of Daily Roster. The Registrar is responsible for the maintenance of a daily roster of those patients who are considered to be seriously ill and for the dissemination of information pertaining to such patients to all concerned. Such roster will be prepared daily by the Registrar in sufficient number of copies to effect the distribution to all offices and activities concerned.

APPENDIX D

CLASSIFICATION OF PATIENTS ACCORDING TO NURSING CARE NEEDS

CLASSIFICATION OF PATIENTS ACCORDING TO NURSING
CARE NEEDS, CATEGORY I, INTENSIVE CARE¹

1. General

The classification of patients into four categories according to nursing care needs has been established as a method for determining nursing personnel requirements in Army hospitals. The approach used is from the standpoint of nursing care requirements rather than only the degree of illness or diagnosis of the patient. The following factors are to be considered: nursing procedure requirements, physical restrictions, emotional factors, and instructional needs.

2. Category I

APPENDIX D

A. Definition. A patient who requires intensive nursing care. CLASSIFICATION OF PATIENTS ACCORDING

TO NURSING CARE NEEDS

(1) A patient who has acute symptoms--usually termed acutely ill.

(2) A patient who requires continuous treatment and/or observation and/or instruction.

(3) A patient whose activity must be rigidly controlled.

(4) A patient whose deviant behavior pattern is very marked.

B. Examples.

(1) Medical.

¹Information extracted from U. S., Department of the Army, Brooke Army Medical Center, Medical Field Service School, Nursing Service in the Army, Special Text 6-150 (Fort San Houston, Tex.: Medical Field Service School, 1963).

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(a) A cardiac patient having frequent changes in pulse rate. Medications are given both for supportive and for response, such as digitalization. Fluid balance, intake and output. Oxygen therapy equipment is available for immediate use. Patient is either restricted or is too ill to assist. When changes in position are made, the pulse rate and signs for dyspnea and cyanosis are checked.

CLASSIFICATION OF PATIENTS ACCORDING TO NURSING

CARE NEEDS, CATEGORY I, INTENSIVE CARE¹

1. General

The classification of patients into four categories according to nursing care needs has been established as a method for determining nursing personnel requirements in Army hospitals. The approach used is from the standpoint of nursing care requirements rather than only the degree of illness or diagnosis of the patient. The following factors are to be considered: nursing procedure requirements, physical restrictions, emotional factors, and instructional needs.

2. Category I

A. Definition. A patient who requires intensive nursing care. This requirement will be manifested by:

(1) A patient who exhibits extreme symptoms--usually termed acutely ill.

(2) A patient who requires continuous treatment and/or observation and/or instruction.

(3) A patient whose activity must be rigidly controlled.

(4) A patient whose deviant behavior pattern is very marked.

B. Examples.

(1) Medical.

¹Information extracted from U. S., Department of the Army, Brooke Army Medical Center, Medical Field Service School, Nursing Service in the Army, Special Text 8-150 (Fort Sam Houston, Tex.: Medical Field Service School, 1963).

(a) A cardiac patient having frequent changes in pulse rate. Medications are given both for supportive and for specific measures, with careful observation by the professional nurse as to responses, such as digitalization. Fluid balance is observed, and accurate measuring of intake and output. Oxygen therapy equipment is available for immediate use. Patient is either restricted or is too ill to move without assistance. When changes in position are made, the pulse rate and signs for dyspnea and cyanosis are carefully observed. This patient requires considerable psychological support.

(b) A diabetic patient in the early stages of illness. Diet and insulin must be controlled--special skin care is necessary. Instructional needs are many as the patient must be taught such things as signs and symptoms of diabetic coma and insulin shock, and what to do if the symptoms arise. Importance of diet, rest, care of the feet, testing of urine, etc., are stressed. The patient's mental requirements and adjustments may be great until he accepts his diagnosis and realizes he can live a normal life.

(2) Surgical.

(a) A patient with extensive burns. Patient's activities are controlled. Special eye and mouth care are necessary. Laboratory studies are many, and I.V. fluids, as well as transfusions, are required. Depending on areas burned such sequelae as blindness and scarring may result from the burns which would necessitate considerable mental adjustment.

(b) A patient newly placed in traction who must be observed for skeletal alignment, nerve injury, undue pressure, development of emboli. A patient newly placed on Foster or Stryker frames, such as patients with cervical fractures or dislocations, paraplegia, amputation. A patient newly casted who must be observed for signs of ischemia and pressure paralysis.

(3) Obstetrical.

(a) A patient in labor, and for first twelve hours following delivery.

(b) A patient who develops severe post-partum complications that require constant observation and treatment.

(c) Prenatal patients with severe complications.

(4) Nursery.

(a) Premature infants.

(b) Any newborn infant with injuries or complications.

(5) Neuropsychiatric.

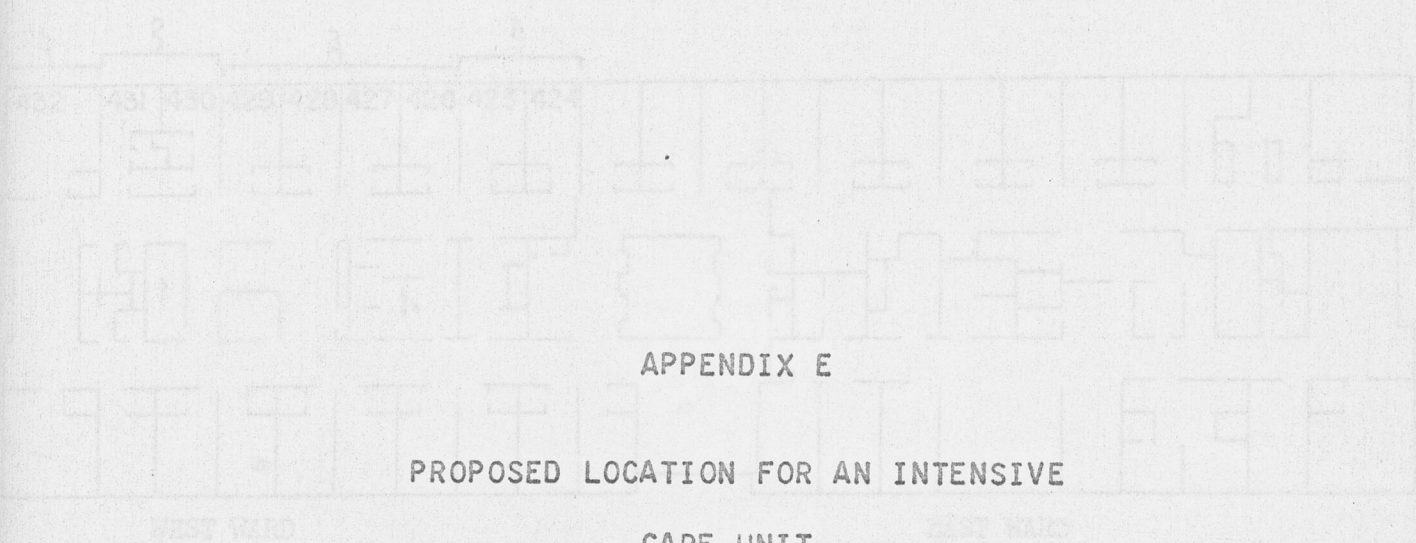
(a) A neurological patient with controlled activities which necessitates frequent turning and special skin care. Observational skills are required and the emotional needs of the patient are great.

(b) Hypoactive and hyperactive patients.

(6) Pediatrics.

(a) Acutely ill children who manifest a stage of extreme symptoms. Frequent ministrations, treatment, and close observations are necessary.

(b) A child in the early stages of polio or other communicable or infectious disease.



APPENDIX E

PROPOSED LOCATION FOR AN INTENSIVE CARE UNIT

LEGEND

- 1. Nursing Station
- 2. Isolation Rooms - 1 Bed, Each Room
- 3. Intensive Care Rooms - 1 or 2 Beds, Each Room
- 4. Flexible Rooms - 4 Beds, Each Room

TOTAL BEDS

- (Four Semi-Private Rooms - 4 to 8 Beds)
- (Two Isolation Rooms - 2 Beds)
- (Three Flexible Rooms - 4 Beds)

BIBLIOGRAPHY

Government Publications

U. S. Department of the Army, Brooke Army Medical Center, Medical Field Service School, Nursing Service in the Army, Special Text B-150, Fort Sam Houston, Tex.: Medical Field Service School, 1961.

Office of The Surgeon General, Table of Distribution and Allowances, Reynolds Army Hospital, Fort Sill, Oklahoma, TDA No. 4140-3003, Washington, U. S. Government Printing Office, March 15, 1965.

Reynolds Army Hospital, Handbook of Hospital Information, Fort Sill, Okla.: Reynolds Army Hospital, 1965.

U. S. Department of Defense, Emergency War Surgery NATO Handbook, Washington, U. S. Government Printing Office, 1958.

BIBLIOGRAPHY

U. S. Department of Health, Education, and Welfare, Public Health Service, Elements of Progressive Patient Care, PHS Pamphlet No. 930-G-1, Washington: U. S. Government Printing Office, 1962.

A Facility Designed for Coronary Care, PHS Publication No. 930-G-19, Washington: U. S. Government Printing Office, 1965.

Progressive Patient Care, A Challenge to Hospitals and Health Agencies, by Jack C. Waldman, Washington: U. S. Government Printing Office, May, 1963.

The Progressive Patient Care Hospital--Estimating God Needs, PHS Pamphlet No. 938-C-2, Washington: U. S. Government Printing Office, 1963.

BIBLIOGRAPHY

Government Publications

- U. S. Department of the Army. Brooke Army Medical Center. Medical Field Service School. Nursing Service in the Army. Special Text 8-150. Fort Sam Houston, Tex.: Medical Field Service School, 1963.
- _____. Office of The Surgeon General. Table of Distribution and Allowances, Reynolds Army Hospital, Fort Sill, Oklahoma. TDA No. 4A40 5003. Washington: U. S. Government Printing Office, March 15, 1966.
- _____. Reynolds Army Hospital. Handbook of Hospital Information. Fort Sill, Okla.: Reynolds Army Hospital, 1965.
- U. S. Department of Defense. Emergency War Surgery NATO Handbook. Washington: U. S. Government Printing Office, 1958.
- U. S. Department of Health, Education, and Welfare. Public Health Service. Elements of Progressive Patient Care. PHS Pamphlet No. 930-C-1. Washington: U. S. Government Printing Office, 1962.
- _____. A Facility Designed for Coronary Care. PHS Publication No. 930-D-19. Washington: U. S. Government Printing Office, 1965.
- _____. Progressive Patient Care, A Challenge to Hospitals and Health Agencies, by Jack C. Haldeman. Washington: U. S. Government Printing Office, May, 1959.
- _____. The Progressive Patient Care Hospital--Estimating Bed Needs. PHS Pamphlet No. 930-C-2. Washington: U. S. Government Printing Office, 1963.

Books

Beal, John N. (ed.) Manual of Recovery Room Care. 2nd ed. New York: Macmillan Company, 1962.

Brown, Esther Lucille. Newer Dimensions of Patient Care, Part I. New York: Russell Sage Foundation, 1962.

Owen, Joseph K. (ed.) Modern Concepts of Hospital Administration. Philadelphia: W. B. Saunders Company, 1962.

Periodicals

Abdullah, Faye G. "Progressive Patient Care--A Challenge for Nursing," Hospital Management, XXCIX, No. 6 (June, 1960), 135.

Adams, Ralph E. "Intensive Care Research," Part II, Canadian Hospital, XL, No. 1 (January, 1964), 62.

Cadmus, Robert R. "Special Care for the Critical Case," Hospitals, XXVIII, No. 9 (September, 1954), 65-66.

Claussen, Esther, Maj., U.S.A. "Categorization of Patients According to Nursing Care Needs," Military Medicine, XVI, No. 3 (March, 1955), 209.

DeBackey, David. "A New Approach to Intensive Care," Hospital Progress, XXXV, No. 3 (March 1, 1960), 81-83.

Dornette, William H., and Durbin, Robert L. "Design and Construction of an Intensive Care Facility," Part I, Hospital Management, XCI, No. 2 (February, 1961), 35-36; Part II, Hospital Management, XCI, No. 3 (March, 1961), 51-53.

Haldeman, Jack, and Abdullah, Faye G. "Concepts of Progressive Patient Care," Hospitals, XXXIII, No. 6 (May 16, 1959), 14-22.

Hoge, Verne. "Hospital Facilities Should Fit the Patient," Modern Hospital, XXCVIII, No. 3 (March, 1957), 51-54.

"How to Provide the Best Intensive Patient Care," Modern Hospital, C, No. 1 (January, 1963), 67-79.

Jacobs, Theodore T. "Organizing and Operating an Intensive Care Unit," Hospitals, XXXIX, No. 19 (October 1, 1965), 70.

Judd, Richard. "Twin Units Serve Teaching Hospital," Modern Hospital, C, No. 1 (January, 1961), 35-37.

Kinney, John M. "Report of Sessions of the Clinical Congress, American College of Surgeons, Chicago, 1964," Hospital Topics, XLIII, No. 1 (January, 1965), 102.

Sandove, Max S.; Cross, James; Higgins, Harry G.; and Segall, Manuel. "The Recovery Room Expands Its Service," Modern Hospital, XXCIII, No. 5 (November, 1964), 69.

Wheeler, E. Todd. "Report of Sessions of the Clinical Congress, American College of Surgeons, Chicago, 1964," Hospital Topics, XLIII, No. 1 (January, 1965), 103.

Interviews

Reynolds Army Hospital, Fort Sill, Oklahoma. Personal interviews with members of the staff, February and May, 1966.

BIOGRAPHICAL SKETCH

She attended the Military Nursing Advanced Course at
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[REDACTED] She graduated from the School of Nursing, St. Mary's Hospital, Philadelphia, Pennsylvania, and was appointed as a second lieutenant, U. S. Army Nurse Corps, in June, 1943. She served, in Europe, primarily, and returned to civilian status in December, 1945.

She received a Bachelor of Science degree in Education from Temple University, Philadelphia, Pennsylvania, in 1951. Nursing positions held prior to her return to active military status included: head nursing, medical and neurosurgical, in U. S. Veterans Administration hospitals in Van Nuys, California, and in Washington, D. C., and instructor, Cooper Hospital School of Nursing, Camden, New Jersey.

In October, 1953, she returned to active duty in the rank of captain. Her assignments include: staff nurse, U. S. Army Hospital, Fort Hood, Texas, 1953-1954; medical head nurse and supervisor, 121st Evacuation Hospital, Korea, 1954-1956; Army Nurse Corps recruitment counselor for Upper New York State, 1956-1960; chief nurse, 128th Evacuation Hospital, and nurse consultant to the surgeon, 7th U. S. Army, West Germany, 1961-1964; nursing service supervisor, Brooke General Hospital, Fort Sam Houston, Texas, 1964-1965.

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A Problem Solving Thesis Submitted to the Faculty of Baylor University in Partial Fulfillment of the Requirements for the Degree of
Master of Hospital Administration

of
Lieutenant Colonel Elizabeth A. Blomer, AMC

August, 1970

65 Pages

A copy of this document may be obtained on loan library loan from Steinson Library, United States Army Medical Field Service School, Brooke Army Medical Center, Fort Sam Houston, Texas.

This paper presents the report of an analysis of physical facilities available within the nursing units at Reynolds Army Hospital, Fort Hill, Oklahoma. The purpose of the study was to determine which of the existing units was the most desirable for location of an intensive care unit.

Functional utility and operational efficiency were viewed from the perspective of basic concepts underlying intensive patient care. Recommended solutions to the problem included creation of an autonomous, self-supporting unit within an existing nursing unit.

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