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REPORT TO THE COMMITTEE
ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES

BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

Congressional Policy Guidance Should Improve Military Hospital Planning

Department of Defense

Defense is undertaking a medical facility modernization program estimated to cost $2.9 billion and to continue through fiscal year 1980.

In July 1976, the Congress gave Defense.

--A method for determining the number of acute care hospital beds for active duty members and their dependents.

--Guidance on providing acute care beds for other eligible beneficiaries.

--Guidance on providing for specialized medical facilities and other military requirements.

--Direction on the coordination needed between the Federal and civilian sectors.

Prompt implementation of these guidelines should improve Defense's hospital planning and enable the Congress to make more informed decisions when considering the need for future hospitals.

HRD-77-5

[illegible] 15, 1976

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-161475

The Honorable George Mahon
Chairman, Appropriations Committee
House of Representatives

Dear Mr. Chairman:

This report is in response to your October 28, 1975, request asking us to review the planning for three military hospitals included in the Department of Defense's fiscal year 1977 budget request--Fort Campbell Army Hospital, Orlando Naval Hospital, and the Altus Air Force Base Hospital.

During the process of our review, the Congress approved funds for the three hospitals and provided policy guidance to the Department of Defense on hospital planning. Therefore, as agreed with your office, the report now focuses on the congressional guidance provided and action the Defense Department needs to take to insure that future hospital planning is in accordance with this policy guidance.

The report also discusses our model for determining acute care bed needs in military hospitals and its application to the hospitals included in the Department's fiscal year 1977 budget request. The model used in determining hospital size was developed as part of our earlier review of planning for the San Diego Naval Hospital. Our method of determining hospital size has been accepted by the Department of Defense as more precise than its planning criteria for measuring acute care bed needs.

The Department's written comments have not been included in this report because they addressed issues included in the draft report which no longer apply in view of recent congressional action. We have discussed the final report with appropriate Department officials.

Sincerely yours,

Elmer B. Staats

Comptroller General
of the United States

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ABBREVIATIONS

CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
DOD	Department of Defense
GAO	General Accounting Office
PAS	Professional Activity Study

COMPTROLLER GENERAL'S REPORT TO THE COMMITTEE ON APPROPRIATIONS, HOUSE OF REPRESENTATIVES

CONGRESSIONAL POLICY GUIDANCE SHOULD IMPROVE MILITARY HOSPITAL PLANNING
Department of Defense

DIGEST

The Department of Defense is undertaking a health facilities modernization program estimated to cost $2.9 billion and to continue through fiscal year 1980. The House Committee on Appropriations asked GAO to review the planning for three hospitals included in Defense's fiscal year 1977 budget request--the Fort Campbell Army Hospital, the Orlando Naval Hospital, and the Altus Air Force Hospital.

During an earlier review of the planned San Diego Naval Hospital, 1/ GAO developed a model for determining acute care bed needs in military hospitals. The model was used when reviewing the proposed Fort Campbell and Orlando hospitals (see pp. 14, 16). The model was not applied to the proposed Altus hospital because the patient workload data base was too small. However, GAO did analyze historical workload data and Defense's size estimate for the Altus hospital.

The GAO model for determining acute care bed needs and the size analysis for each hospital are discussed in chapter 3. In July 1976, the Congress approved funds for the three hospitals.

After GAO completed fieldwork on the three hospitals, the Committee requested the information GAO had gathered. It was provided and was used by the Committee during its

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1/"Policy Changes and More Realistic Planning Can Reduce Size of New San Diego Naval Hospital," MWD-76-117, Apr. 7, 1976.

fiscal year 1977 military construction hearings. Also, on May 2, 1976, GAO reported to the Committee on the results of its size analysis of the proposed Orlando Naval Hospital (MWD-76-127).

Both the report on the San Diego hospital and the information GAO gave the Congress regarding the three hospitals were instrumental in Congress decision to provide Defense with policy guidance in July 1976 on the method to be used for determining acute care bed needs and other matters affecting future military hospital planning. A synopsis of the congressional policy guidance follows.

--Acute care hospital bed requirements for active duty members and their dependents throughout the Defense hospital system should be calculated with the GAO model for determining hospital size using teaching hospital data to determine the size of a teaching hospital and nonteaching hospital data to determine the size of a nonteaching hospital. (See p. 6.)

--Defense should carefully review the adequacy of its guidelines on providing beds for retirees and dependents of retired and deceased members. While the review is underway, beds for these beneficiaries should be provided in accordance with existing guidelines which permit the bed requirements for active duty members and their dependents to be increased by 5 percent in nonteaching hospitals and 10 percent in teaching hospitals. (See p. 7.)

--Basic bed requirements calculated using the GAO model may be adjusted to provide for such legitimate program factors as mobilization requirements and such specialized facilities as a burn center. However, such adjustments must be fully

justified and supported and requested as add-ons to the basic bed requirements. (See p. 6.)

--Basic requirements should not include beds for beneficiaries currently receiving care in civilian hospitals under the Civilian Health and Medical Program of the Uniformed Services. However, the Congress will consider providing beds for these beneficiaries in new hospitals provided in-house treatment is less costly to the Government as a whole. (See p. 6.)

--Defense should develop policies to make cost effective use of existing adequate Federal and civilian hospitals and should plan future bed capacity with other Federal and civilian health care representatives. (See p. 7.)

In addition, the Congress gave Defense specific guidance for planning the new San Diego Naval Hospital.

The Congress has given Defense clear direction which should improve the planning of new military hospitals. To the extent future hospitals are planned based on this policy guidance, Congress should be able to better identify and consider the beds required to support the basic medical needs of the beneficiary population and beds required for other valid purposes. (See p. 8.)

The Secretary of Defense should promptly develop specific instructions to implement the policy guidance and communicate those instructions to Army, Navy, and Air Force officials responsible for planning military hospitals. (See p. 8.)

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CHAPTER 1

INTRODUCTION

In February 1972 the Secretary of Defense approved an accelerated medical facilities modernization program to be accomplished in fiscal years 1974-78. Because of delays, the target date has now been extended through 1980. The total cost is estimated to be $2.9 billion. The Department of Defense (DOD) requested $145 million in its fiscal year 1977 budget to construct and renovate hospitals and related facilities. Approximately $106 million of this amount was to be used to replace the Fort Campbell Army Hospital in Kentucky, the Orlando Naval Hospital in Florida, and the Altus Air Force Base Hospital in Oklahoma.

At the request of the Chairman, Committee on Appropriations, House of Representatives (see app. I), we reviewed DOD's planning for these hospitals.

CONSTRUCTION AND USE OF MEDICAL FACILITIES

Section 1087 of title 10 of the United States Code provides that space for inpatient care in military facilities may be planned for active duty members, dependents of active duty members, retirees, and dependents of retired and deceased members. The legislation gives the Secretary of Defense authority to limit the space planned for the beneficiaries as follows:

> "The amount of space so programmed shall be limited to that amount determined by the Secretary concerned to be necessary to support teaching and training requirements in uniformed services facilities, except that space may be programmed in areas having a large concentration of retired members and their dependents where there is also a projected critical shortage of community facilities."

Sections 1074 and 1076 of title 10 provide that dependents of active duty members, retirees and dependents of retired and deceased members are entitled to receive medical care in military hospitals subject to the availability of space, facilities, and staff. These beneficiaries are also authorized to receive medical care from civilian sources

under the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS).

Before using civilian facilities, retirees and all dependents residing within 40 miles of a military medical facility must obtain a nonavailability statement from an official at that military hospital certifying that it is not practical, or the facility is unable, to furnish the required inpatient care. However, DOD implementing instructions provide exceptions to this general rule in certain circumstances.

The Government pays most of the costs of medical care provided in civilian facilities. All retirees and the dependents of retired and deceased members who are eligible for Medicare lose their CHAMPUS benefits upon reaching age 65. These beneficiaries are still eligible for care in military facilities and some for care in Veterans Administration facilities.

The Assistant Secretary of Defense for Health Affairs is responsible for (1) reviewing health matters within DOD, including the construction of military hospitals, and (2) assisting the Secretary of Defense with the health and medical aspects of DOD policies, plans, and programs. The Surgeon General of each service is responsible for determining requirements for hospitals in accordance with established DOD policies and procedures.

DOD's criteria for determining the size of hospitals is in draft form, dated May 15, 1974. It provides 4 acute care beds per 1,000 active duty members and 4 acute care beds per 1,000 dependents of active duty members. Space is included for retirees and dependents of retired and deceased members by adding 5 percent in nonteaching hospitals and 10 percent in teaching hospitals to the space provided for active duty members and their dependents.

According to DOD, the 10-percent factor for teaching hospitals was determined during meetings in 1966 and 1967 between DOD and the American Medical Association accrediting boards for the medical specialties. After considering several alternatives, the Secretary of Defense selected 5 and 10 percent as appropriate planning factors.

Army and Navy plans for the hospitals in the 1977 budget were based on the DOD draft criteria. The Air Force plans, however, were based on a 1968 DOD criterion which uses past hospital use data to estimate future hospital bed

requirements. DOD generally adjusts bed estimates when necessary to reflect the provisions in its draft criteria.

INFORMATION PREVIOUSLY SUPPLIED TO THE CONGRESS AND RESULTING ACTIONS

On April 7, 1976, we issued a report entitled "Policy Changes and More Realistic Planning Can Reduce Size of New San Diego Naval Hospital," (MWD-76-117). In that report we recommended that DOD change its criteria for determining the acute care bed needs for new military hospitals because it:

--Did not accurately reflect actual or expected demand for acute care beds.

--Provided bed capacity to absorb the CHAMPUS workload into the military health care system.

--Provided for a substantial number of beds, in some instances, to treat retirees and dependents of retired and deceased members when there were acute care beds available in nearby civilian facilities.

We proposed a new method for determining acute care bed requirements which, basically, accumulated actual length of stay data for each patient in a military hospital, adjusted it to reflect the average length of stay data of comparable patients in civilian hospitals, and calculated the number of acute care beds needed based on the adjusted data. In commenting on our report, DOD said that our model was sound and represented another step forward in the area of planning the size of hospital facilities.

In the report on the San Diego Naval Hospital we also noted existing opportunities to further reduce the number of acute care beds needed in a new military hospital. These opportunities were addressed in two fundamental questions:

1. Should new hospital facilities be built to support the medical needs of all segments of the current beneficiary population--active duty members, their dependents, retirees, and dependents of retired and deceased members--or should some limitation be specified?

2. Should some eligible beneficiaries be treated at other nearby Federal hospitals which have large excess bed capacities?

After completing our fieldwork on the Fort Campbell, Orlando, and Altus hospitals, we were asked to provide the House Appropriations Committee with the information we had gathered. This information, provided on March 31, 1976, was used by the Committee during its fiscal year 1977 military construction hearings.

On May 2, 1976, we reported to the committee on the results of our analysis of the size of the proposed Orlando Naval Hospital (MWD-76-127). The committee used this information during its markup session on DOD's fiscal year 1977 military construction request.

Both the report on the San Diego hospital and the information we gave the Congress on the three hospitals included in DOD's fiscal year 1977 budget request were instrumental in the Congress decision to give DOD policy guidance on the criteria to be used in determining hospital size and other matters affecting future military hospital planning. When the Congress provided this policy guidance to DOD in the "House of Representatives Conference Report No. 94-1314," July 1976, it also approved $100.8 million to construct the three military hospitals which were the subject of our review. Accordingly, as agreed to by the committee, this report now focuses on what DOD must do to carry out the Congress policy guidance rather than on the three hospitals included in its fiscal year 1977 budget request.

DOD's written comments addressed the version of this report which focused on the three hospitals. Because those comments were made without the benefit of the congressional policy guidance and because they raised issues which are no longer pertinent in view of the recent congressional action, they are not included in this report. We have, however, discussed this report with appropriate DOD officials and their comments are incorporated where appropriate.

CHAPTER 2

CONGRESSIONAL POLICY GUIDANCE SHOULD

IMPROVE DOD'S METHOD FOR

PLANNING FUTURE MILITARY HOSPITALS

The Congress has provided DOD with policy guidance on several issues which should substantially improve future military hospital planning. Some of these issues were called to the Congress attention in our previous report on the planning for the new San Diego Naval Hospital.

Overall, the policy guidance gave DOD clear direction on the method to be used in (1) planning for acute care beds in military hospitals for all beneficiaries and (2) providing for specialized facilities and other military requirements. In addition, the guidance called for greater coordination among Federal agencies and civilian sectors in future hospital planning. Prompt implementation of this policy guidance should improve DOD's planning for future military hospitals--including those to be constructed as part of its $2.9 billion medical facility modernization program.

CONGRESSIONAL POLICY GUIDANCE

In July 1976, the Congress adopted the conference report on the military construction appropriations bill for fiscal year 1977, which provided DOD with policy guidance concerning the following issues:

--The method to be used by DOD to determine acute care bed requirements for military hospitals.

--The accommodation of the CHAMPUS workload.

--The planning of acute care beds for retirees and dependents of retired and deceased military personnel.

--The use of nearby existing Federal and civilian health care facilities.

--The size of the San Diego Naval Hospital.

Determining acute care bed requirements

The conference report stated that acute care bed requirements for active duty members and their dependents throughout the Defense hospital system should be calculated with our model for determining hospital size using teaching hospital data to determine the size of a teaching hospital and nonteaching hospital data to determine the size of a nonteaching hospital. The method is to be used consistently when determining the size of hospitals throughout the DOD hospital system. Exceptions could be made for very small hospitals where our method may have limited application because of the small workload data base generated by those facilities.

DOD said that our method for determining hospital size would be used until a more restrictive policy, which includes matters not detailed in the conference report, could be developed and carried out.

According to the conference report, acute care bed requirements could be adjusted to provide for legitimate program factors such as mobilization requirements and such specialized facilities as a burn center. However, such adjustments must be fully justified and supported, and should be requested as add-ons to the basic hospital size needed to meet the requirements of active duty members and their dependents calculated using our method for determining hospital size.

CHAMPUS workload

The conference report also discussed section 750 of Public Law 94-212 which directed retirees and dependents residing within 40 miles of a military medical facility to seek care at that facility. 1/ If care could not be provided there, the beneficiary would be authorized to obtain care in a civilian hospital under the CHAMPUS program. This legislation was designed to reduce the CHAMPUS workload and increase the use of existing military medical facilities.

The conference report reaffirmed that the intent of section 750 was to increase the use of beds in existing military hospitals and it was not be to used as a rationale for justifying the need for additional acute care beds. The report indicated however, that the Congress would consider providing beds in new military hospitals or in hospital facilities which

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1/Restrictive language repeated in sec. 742 of DOD's fiscal year 1977 Appropriation Act--Public Law 94-419.

are being extensively modified--for beneficiaries now receiving care under the CHAMPUS program--provided the cost of such in-house treatment was less costly to the Government as a whole, and such a determination was supported by careful economic analysis.

Providing beds for retirees and dependents of retired and deceased members

The conference report directed DOD to carefully review its guidelines for providing bed capacity for retirees and dependents of retired and deceased members. Until the review was completed, the Congress suggested that DOD follow the existing guidelines which provide for increases of 5 percent in planning nonteaching hospitals and 10 percent in planning teaching hospitals. The review was considered necessary because:

--The guidelines were established several years ago.

--Military medical teaching programs have changed.

--The retired military population has been increasing and has tended to concentrate in certain areas.

Use of other nearby Federal and civilian facilities

The conference report expressed the view that in order to maximize the effect of Federal dollars already spent and to insure that health care facilities are not overbuilt, better coordination is needed among Federal agencies and civilian medical sectors. Therefore, the conference report recommended that DOD:

--Develop policies to make maximum and cost effective use of existing adequate Federal and civilian hospitals.

--Coordinate the planning of future bed capacity, particularly any additional capacity for retired personnel, with other Federal and civilian health care representatives.

San Diego Naval Hospital

Finally, the conference report directed the Navy to determine the size of the San Diego Naval Hospital, a teaching hospital, using teaching hospital data. Further, the report directed the Navy to provide beds for retirees and dependents of retired and deceased members in accordance with

the existing guidelines, unless good reason was shown to deviate from those guidelines. As previously mentioned, current DOD guidelines would permit an additional 10 percent of the beds needed for active duty members and their dependents. In addition, the Navy was specifically directed to follow the guidance in the conference report on the space to be provided for CHAMPUS patients.

CONCLUSIONS

We believe that the Congress policy guidance has provided DOD with clear direction that can improve the planning of new military hospitals--including those to be constructed as part of DOD's $2.9 billion medical facility modernization program. That direction calls for greater recognition of military hospitals as an integral part of the Nation's total health care capability and greater interaction among DOD and other Federal and civilian health care representatives in future hospital planning.

The policy guidance recognizes that a large portion of DOD's beneficiary population is eligible for medical care in civilian hospitals under one or more Federal programs, or in other segments of the Federal health care system. The report also directs DOD to use a method similar to our model for determining the basic requirements for hospital acute care beds. Then DOD can consider additional beds for other justifiable and supportable program factors. This approach should permit the Congress to better identify the beds required to support the basic medical needs of the beneficiary population and those beds justified for other purposes.

RECOMMENDATION

We recommend that the Secretary of Defense act promptly to develop specific instructions to implement the congressional policy guidance and communicate those instructions to Army, Navy, and Air Force officials responsible for planning military hospitals.

CHAPTER 3

ANALYSIS OF HOSPITAL SIZE

As part of our review, we assessed the overall condition of three hospital facilities included in DOD's fiscal year 1977 budget, analyzed their workload by beneficiary category, and evaluated the hospital size proposed by DOD. We also assessed the availability of excess beds in other nearby Federal and civilian hospitals.

On March 31, 1976, we provided the House Appropriations Committee with information on the condition of the three existing hospitals, the proposed new construction, and the availability of beds in other Federal and civilian hospitals located near the proposed military hospital. On May 2, 1976, we reported to the committee on the results of our analysis of the size of the new Orlando Naval Hospital. The committee used this information when considering DOD's fiscal year 1977 budget request for the military medical construction program.

This chapter describes how our hospital sizing model works and presents the results of our size analysis for the Fort Campbell and Orlando Hospitals. We did not use our model to analyze the size of the Altus Hospital because we believed the workload data base was too small to permit a valid statistical comparison with civilian hospitals. Instead we evaluated hospital use data provided by the Air Force.

GAO MODEL FOR DETERMINING HOSPITAL SIZE

Our model for determining hospital size provides an estimate of acute care bed needs in military hospitals by accumulating the actual patient workload by diagnosis and age group, then adjusting it to reflect data on average lengths of stay in civilian hospitals. The civilian hospital data is available from the Commission on Professional and Hospital Activities.

The Commission's Professional Activity Study (PAS) publishes average lengths of stay statistics by diagnostic category and age for patients discharged from PAS-member hospitals. Statistics are published for regions of the United States and the country as a whole. Member hospitals use PAS data as a measure of their own efficiency in treating patients. In analyzing the bed needs for the Fort Campbell Army Hospital and Orlando Naval Hospital, we used the PAS data for the southern region of the country for 1974 so that the

resulting hospital size would reflect the appropriate treatment pattern for that region. The PAS southern region statistics include data from 440 hospitals. About 33 percent of these have internship and residency programs. Of the total 440 hospitals, 23 had over 500 beds, 66 had between 300 and 500 beds, and 351 had less than 300 beds.

The PAS system has 349 primary diagnoses categorized. The average length of stay can be determined by knowing (1) the primary diagnosis, (2) if the patient had a single or multiple diagnosis, (3) if the patient underwent an operation, and (4) the patient's age. The value of the data is enhanced by "variance" figures which allow the user to statistically determine its degree of reliability. PAS also provides length-of-stay figures for various percentiles of the population. For example, the length-of-stay figure at the 95th percentile is exceeded by only 5 percent of the population.

Below is an example of data for one diagnostic group.

178: Acute appendicitis without peritonitis (540.0)

TYPE OF PATIENT (1)	TOTAL PATIENTS (2)	AVG. STAY (3)	VARIANCE (4)	PERCENTILES 50th (7)	PERCENTILES 75th (8)
1. SINGLE DX					
A. Not Operated					
0-19 YRS	147	2.6	3	2	3
20-34	70	2.6	3	2	4
35-49	26	3.2	5	2	5
50-64	15	3.4	4	3	5
65+	10	6.6	10	6	10
B. Operated					
0-19 YRS	8539	4.2	5	4	5
20-34	4472	4.5	7	4	5
35-49	1206	5.3	8	5	6
50-64	592	6.4	16	6	7
65+	175	8.0	19	7	10
2. MULTIPLE DX					
A. Not Operated					
0-19 YRS	52	2.8	2	2	4
20-34	44	3.7	5	3	4
35-49	20	4.9	96	3	5
50-64	14	6.6	27	[illegible]	10
65+	12	7.2	28	[illegible]	10
B. Operated					
0-19 YRS	1278	5.8	17	5	7
20-34	868	6.6	25	6	8
35-49	344	8.4	35	7	10
50-64	252	9.8	53	8	12
65+	167	12.3	47	11	16

Source: "Length of Stay in PAS Hospitals," Commission on Professional and Hospital Activities, 1974.

During 1974, statistics were compiled on 3.2 million of the 3.4 million patients discharged from member hospitals in the southern region. Excluded from the statistics were patients who (1) died, (2) transferred to another hospital, (3) left against medical advice, or (4) lacked pertinent data items in their medical records. Patients who stayed over 100 days are not included in the average figures but are included in the percentile figures. The large base enables PAS to provide accurate average length-of-stay data.

Basically, our method for determining hospital size accumulates the actual use data of each patient in the military hospitals and compares it with the average length of stay of comparable patients in civilian hospitals.

This process was accomplished by a computer program designed to:

--Accumulate the actual length of stay of each patient discharged from each hospital during 1974.

--Extract from the data each patient's primary diagnosis and age, as well as whether the patient had a single or multiple diagnosis, and whether the patient underwent surgery.

--Match each patient's characteristics with those of a corresponding patient in the community hospitals listed in the PAS data.

--Accumulate the corresponding PAS average length of stay for patients discharged from each hospital during 1974.

Since the PAS length-of-stay statistics do not include patients who died or were transferred to other hospitals, we used unadjusted actual length-of-stay data for these patients.

Special consideration was also given to patients who had stayed in the hospital for 100 days or longer. The PAS average length-of-stay figures do not include these individuals, but the PAS percentile distribution data does. We determined the community hospital length of stay for each patient who had stayed 100 days or longer by using the PAS data corresponding to the 95th percentile.

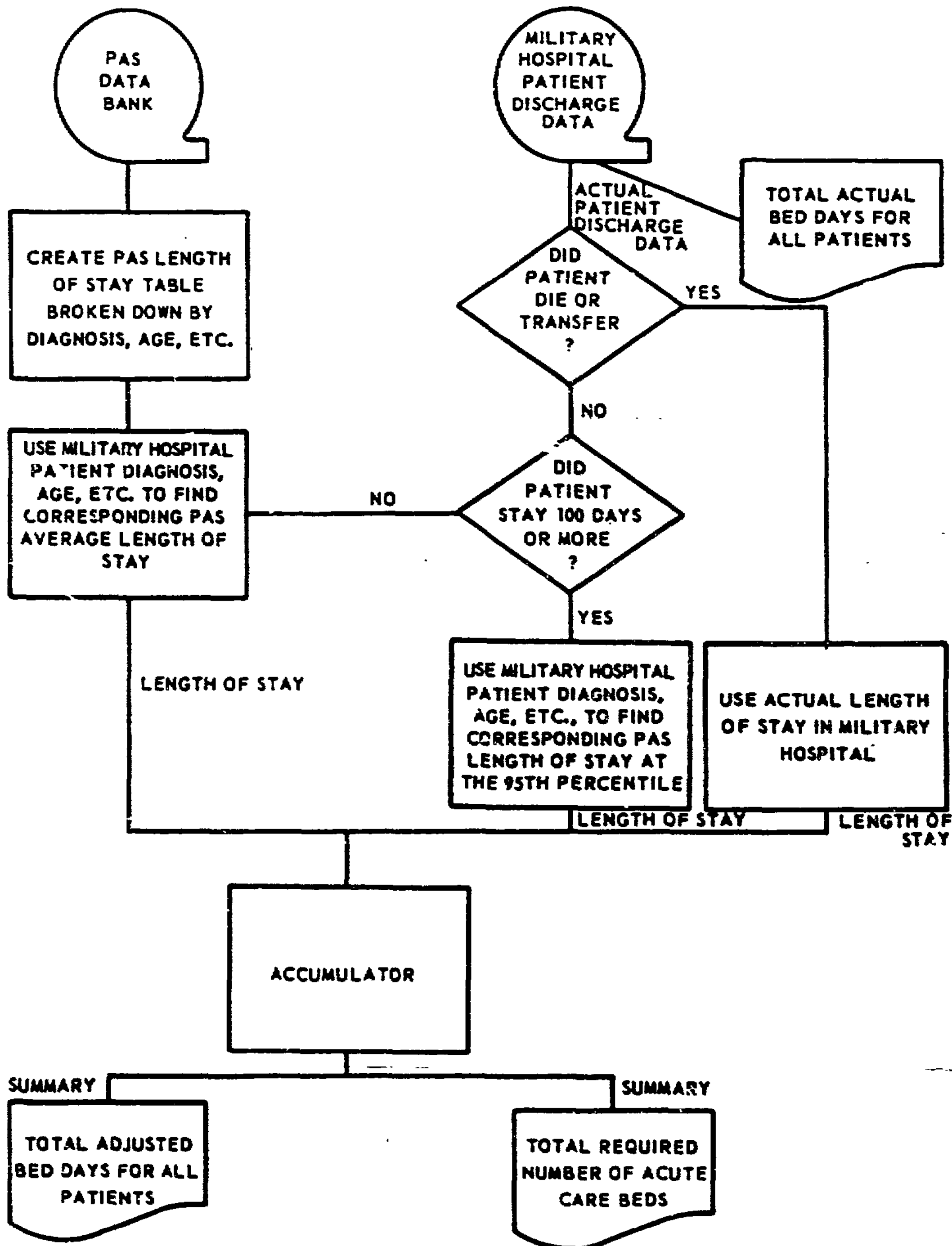
Using the above data, we calculated (1) the total number of bed days for each patient discharged from each of the

hospitals in 1974 and (2) the adjusted total number of bed days. We then determined the number of acute care beds needed by calculating the average number of beds occupied on any given day and then adding a factor to allow for short-term random fluctuations.

Under DOD policy, the size of proposed hospitals with a projected average daily patient load of 90 patients or more can be based on an 80-percent use rate, while the size of smaller hospitals is based on a 75-percent use rate. Accordingly, the total number of required beds projected on the basis of past experience is increased 25 percent and 33 percent, respectively.

The flow chart on the following page illustrates the sequence of operations which leads to the hospital size determination.

SEQUENCE OF OPERATIONS IN DETERMINATION OF HOSPITAL SIZE



FORT CAMPBELL ARMY HOSPITAL

The new Fort Campbell hospital will consist of a six-floor inpatient tower and two adjacent two-floor buildings containing 241 acute care beds, as well as ancillary services and outpatient clinics. There is no provision for separate light care facilities in the hospital design. As of September 1976, the new hospital was estimated to cost $58.2 million.

Size analysis

DOD's estimate for 241 acute care beds at the Fort Campbell hospital was based on providing 4 beds per 1,000 active duty members and their dependents, plus 5 percent more bed capacity for retirees and dependents of retired and deceased members.

The following table compares the estimated beds needed based on actual use by the hospital in calendar year 1974 with estimated beds needed based on PAS data.

	Beds needed in 1974 (note a)			
	Estimate based on PAS data		Estimate based on actual use	
Beneficiary category	Number	Percent	Number	Percent
Active duty	126	60	172	69
Dependents of active duty	50	24	46	19
Retirees	13	6	12	5
Dependents of retired/ deceased	16	8	16	6
Others	5	2	2	1
Total	210	100	248	100

a/These estimates were based on an 80-percent occupancy rate in accordance with DOD policy for hospitals having an average daily patient load of over 90.

Analysis of active duty patients' actual length of stay in 1974 showed an average of about 14.5 days, while patients in similar age groups with comparable diagnoses stayed an average of about 10.5 days in civilian hospitals. The comparison of bed needs in the previous table and the length-of-stay data above indicate that patient length of stay is not a serious problem at Fort Campbell. Also, during 1974, retirees and dependents of retired and deceased members accounted for 11 percent of the total beds used.

The 1974 bed requirements shown on page 14 are converted to beds-per-1,000 factors when divided by the 1974 population for each beneficiary category as shown below.

Beneficiary category	Population 1974	Estimated beds needed per 1,000 population: Based on PAS data	Estimated beds needed per 1,000 population: Based on actual use
Active duty	21,172	6.0	8.1
Dependents of active duty	30,700	1.7	1.5
Retirees	3,175	4.1	3.8
Dependents of retired/ deceased	6,700	2.4	2.4
Others	-	-	-
Weighted average		3.4	4.0

As shown above, DOD's criterion of 4 beds per 1,000 active duty members and their dependents does not reflect actual or expected use by these beneficiaries.

Using the beds-per-1,000 factors, future bed requirements can be estimated using future population estimates. The following table shows our projections of bed requirements for the Fort Campbell hospital.

Beneficiary category	Projected 1980 population	Estimated beds needed in 1980: Number	Estimated beds needed in 1980: Percent
Active duty	22,488	134	61
Dependents of active duty	31,500	52	24
Retirees	3,175	13	6
Dependents of retired/ deceased	6,700	16	7
Others	-	5	2
Total	63,863	220	100

As shown in the above chart, about 220 acute care beds will be needed to support the medical needs of the projected beneficiary population if hospital use continues at the same rates as in the past. However, if DOD's criterion of 5 percent more beds for retirees and dependents of retired and deceased members were used, the number of acute care beds needed could be reduced to 200.

Light care facilities

In civilian hospitals most patients are discharged to their home for family care when acute care is no longer required. Often a military patient cannot return to a barracks environment because suitable care is not available. In these circumstances light care facilities are needed to supplement the acute care hospital.

Our model above showed that in 1980 about 220 acute care beds will be needed to meet the needs of beneficiaries if they continued to use the facility at the same rate as in the past. If the size of the hospital were determined on the basis of past workload data alone, about 260 beds would be needed. Since patient length of stay is not a serious problem at Fort Campbell, the difference of 40 beds probably reflects the need for light care beds. The 200 acute care bed need, calculated using DOD's 5 percent criterion, and the approximate 40 light care bed requirement is consistent with the 241 bed size requested by DOD.

ORLANDO NAVAL HOSPITAL

The new Orlando Naval Hospital will consist of 104 beds; 88 medical and surgical, 8 obstetrical, and 8 intensive and coronary care. As of September 1976, it was estimated to cost about $24 million.

Size analysis

DOD's estimate of 104 acute care beds for the new Orlando hospital was based on its criterion of 4 beds per 1,000 active duty members and their dependents, plus 5 percent more capacity for retirees and dependents of retired and deceased members.

Using our model for determining hospital size, we calculated the number of beds needed to support the hospital's beneficiary population in 1974. The following table compares, by beneficiary category, the estimated number of beds needed based on actual use with the estimated number needed based on PAS data.

Beneficiary category	Beds needed in 1974 (note a): Estimate based on PAS data: Number	Percent	Estimate based on actual use: Number	Percent
Active duty	20	22	42	34
Dependents of active duty	11	12	11	9
Retirees	28	31	35	29
Dependents of retired/ deceased	28	31	32	26
Others	4	4	3	2
Total	91	100	123	100

a/The estimates in the above table were based on an 80-percent occupancy rate in accordance with DOD's policy for hospitals having an average daily patient load over 90.

Our analysis of the average length of stay data for active duty patients at the Orlando hospital in 1974 showed an average of about 13.5 days, while patients with comparable diagnoses stayed an average of 6.4 days in civilian hospitals.

The average length-of-stay data and the difference of 22 beds needed for active duty members, as shown in the table above, indicates that some patients are staying in acute care beds longer than necessary. We did not evaluate in detail the reasons for excessive lengths of stay at Orlando. However, our review of the San Diego Naval Hospital showed that excessive lengths of stay were due primarily to administrative delays and lack of light care facilities.

The previous table also shows that retirees and dependents of retired and deceased members made up about 55 percent of the hospital's inpatient workload; this high percentage of usage is consistent with statistics of previous years.

The bed requirements shown above are converted to beds-per-1,000 factors by dividing the number of beds by the 1974 population for each beneficiary category as shown on the next page.

Beneficiary category	Population 1974	Estimated beds needed per 1,000 population	
		Based on PAS data	Based on actual use
Active duty	7,835	2.6	5.4
Dependents of active duty	4,383	2.5	2.5
Retirees	12,970	2.2	2.7
Dependents of retired/ deceased	34,950	.8	.9
Others	1,688	2.4	1.8
Weighted average		1.5	2.6

As shown above, DOD's 4 beds per 1,000 population criterion for active duty members and their dependents is not reflected in either expected or actual use.

Using the beds-per-1,000 factors, future needs can be estimated using future population estimates. Our projection for the Orlando hospital is shown below.

Beneficiary category	Projected population 1980	Estimated beds needed in 1980	
		Number	Percent
Active duty	13,982	36	30
Dependents of active duty	8,493	21	17
Retirees	13,694	30	25
Dependents of retired/ deceased	37,229	30	25
Others	1,690	4	3
Total	75,088	121	100

If it were determined that beneficiaries would use the new hospital at the same rates as in the past, 121 acute care beds would be needed for the new hospital with beds for retirees and dependents of retired and deceased constituting about 50 percent of this requirement. However, if DOD's criteria of 5 percent more beds were used for these beneficiaries, there would be a need for a facility with only 60 acute care beds. 1/

1/Use of a 75-percent occupancy rate for hospitals with an average daily patient load of less than 90 would result in a facility of approximately 65 acute care beds.

Light care facilities

As previously indicated some military patients could not be discharged to a barracks environment because suitable care is not available, and in these instances light care facilities are needed.

Officials at Orlando said that a "holding company" was being established for light care patients who are discharged from the hospital but cannot return to full duty. When the holding company is fully operational, 3 to 10 patients a day are expected to reside there. The recruit dispensary at Orlando is being reduced in size from 150 beds to 75 beds and, according to hospital officials, will still have about 35 beds available when modifications are complete. We believe and the Navy agrees that the dispensary could be used to meet the light care needs at Orlando.

ALTUS AIR FORCE HOSPITAL

The new Air Force hospital at Altus will have reinforced concrete frame, floors, roof, and foundation and be partly one-story and partly two-story in design. As of September 1976, the hospital was estimated to cost $11.4 million.

Size analysis

DOD estimated a need for 30 beds in the new Altus Hospital without using its criterion of 4 beds per 1,000 active duty members and their dependents. Instead, the estimate was based on the average daily patient load at the existing hospital during the period February 1974 to March 1975.

Beneficiary category	Average daily patient load Feb. 1974 to Mar. 1975	Beds programed for 1980
Active duty	5	5
Dependents of active duty	10	9
Retirees	2	-
Dependents of retired/ deceased	2	-
Total	19	14
Dispersion factor (note a)		2
Additional 10 beds (note b)		10
5 percent added for retired		2
Total		28
Total with rounding		30

a/The dispersion factor is included to allow for 85-percent average bed occupancy rate.

b/According to DOD, 10 beds are included to "affect unpredictable variants in mission and population."

Our evaluation of hospital use data provided by the Air Force showed that excessive patient length of stay has not been a problem at Altus. During 1975, the average length of stay for all beneficiaries, as well as for active duty patients alone, was about 4 days. This was well below the average length of stay for active duty members at the other facilities. Based on our analysis, DOD's estimate appears adequate assuming the Altus beneficiary population does not change greatly in the future. Air Force population data indicated that the Altus population is expected to decrease by about 4 percent between 1974 and 1981, an amount that would not greatly affect the projected 30-bed requirement.

CHAPTER 4

SCOPE OF REVIEW

Our review was made at the Army Hospital, Fort Campbell, Kentucky; Air Force Hospital, Altus, Oklahoma; and Navy Hospital, Orlando, Florida; Office of the Assistant Secretary of Defense for Health Affairs; Offices of the Surgeons General of the Army and Air Force; and the Bureau of Medicine and Surgery, Washington, D.C.

In reviewing planning for these hospitals and in analyzing hospital size, we looked at:

--Past patterns of use, giving special attention to length-of-stay statistics and how they compare to community hospital data.

--Population served by the hospital health facility.

--Availability of other nearby Federal and nonfederal health facilities. Our review at nonfederal facilities aimed at identifying excess bed capacities and not toward evaluating the willingness of physicians to treat military patients in civilian hospitals under CHAMPUS.

Our primary sources of hospital use statistics were magnetic tape records maintained by the Army Command Health Information Systems and Biostatistics Agency, Fort Sam Houston, Texas; the Air Force Biometrics Division, Washington, D.C.; and the Naval Medical Data Service Center, Bethesda, Maryland. The magnetic tapes contained information on all patients discharged from the hospitals in calendar year 1974. The tapes were verified by comparing a random sample of data for patients discharged in the month of November 1974 against medical records on file at the hospitals.

The average length of stay data for civilian hospitals used in our analysis was obtained from the Commission on Professional and Hospital Activities, Ann Arbor, Michigan. Their Professional Activity Study group publishes average length-of-stay statistics by diagnostic category and age for patients discharged from member hospitals. Member hospitals use PAS data as a measure of their own efficiency in treating patients. The identities of the individual hospitals included in this data were not revealed in any way. Any analysis, interpretation, or conclusion based on this data is ours and the Commission specifically disclaims responsibility for any such analysis, interpretation, or conclusion.

MAJORITY MEMBERS
GEORGE H. MAHON, TEX., CHAIRMAN

Congress of the United States
House of Representatives
Committee on Appropriations
Washington, D.C. 20515

October 28, 1975

B-161475

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Staats:

It is our understanding that the Department of Defense in its fiscal year 1977 budget may request over $250 million for the construction and renovation of hospitals and related facilities. The Committee on Appropriations is concerned that the Department of Defense may be overbuilding hospital facilities and would like the General Accounting Office to review the methodology of the Services and the Office of the Secretary of Defense for planning and approving the construction or renovation of medical facilities. We would like to have your report in time for the appropriation hearings on this matter, which could be as early as April, 1976.

The Committee would like GAO to give special attention to the following:

The reasonableness of DOD's planning formula of 4 beds per 1,000 population served, and the appropriateness of additions made to the formula for light care facilities and patient transfers.

An analysis of the hospitals' current workload by beneficiary category, with special emphasis on the percentage of treatment of military retirees, length of stay, and how this workload influences the proposed bed sizing.

The availability of other nearby Federal hospital facilities and how they are considered in DOD's planning activities.

The Military Construction Subcommittee staff will be available to meet with members of your staff to discuss in more detail the interests of that subcommittee and the selection of specific hospitals for review.

Thank you for your assistance and cooperation.

Sincerely yours,

George Mahon
Chairman