



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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HUMAN RESOURCES
DIVISION

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The Honorable Joseph Addabbo
Chairman, Subcommittee on Defense
Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

Subject: Variations in the Military Services'
Contingency Hospital Programs:
Concerns Remain (GAO/HRD-82-101)

In December 1981, the work we had undertaken to assess the military services' hospital construction plans and plans for acquiring and deploying contingency hospitals--hospitals that would become operational in case of war--was redirected to assist your Committee in considering the services' fiscal year 1983 budget request for their contingency hospital programs. We provided details on the status of all the services' programs and their future plans to your office in May 1982. This report summarizes and updates the results of that work.

The lack of coordination, with the resulting potential for needless overlap, duplication, and waste, was the principal reason the Congress deleted \$87.8 million from the Navy's 1982 contingency hospital budget request, with the understanding that together, the services would develop a coordinated and cost effective approach to meeting their wartime hospital needs. Major differences still exist in the services' contingency hospital programs, encompassing hospital acquisition costs, and operational requirements. While mechanisms to foster interservice coordination have recently been established, they have not had time to significantly affect the services' plans and budgets. Furthermore, the military services do not know the total cost of their programs, which may well exceed the estimated \$1.3 billion in hospital procurement costs. These factors, coupled with the specific concerns with individual service programs discussed below, provide ample basis for continuing concern with the development of these programs.

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BACKGROUND

In recent years, military medical readiness has increasingly become an issue of concern to the Department of Defense (DOD) and the Congress. The issue involves assessing and enhancing many levels of medical care, including

- the ability of the medical corpsman to provide medical care in the field;
- the use of small, usually mobile combat zone hospitals that provide quick, stabilizing medical treatment;
- the use of more fixed, larger hospitals in the communications zone, a relatively safe area outside the combat zone but within the theater of operations, where more definitive, longer term treatment can be provided; and
- the capability of military and civilian hospitals to accommodate wartime casualties.

The three military services, each with its own program, have placed significant emphasis on the communications zone contingency hospitals. Because the military believes that any conventional war will produce many casualties early in the conflict, the contingency hospitals must be operable soon after the conflict begins.

Our objectives were to compare and contrast the approaches each of the services followed in developing their contingency hospital programs. Specifically, we sought to obtain information on (1) the cost to obtain, store, and maintain the hospitals; (2) the operational requirements of the hospitals; and (3) the extent to which the services were coordinating their programs. As used throughout this report, contingency hospital program refers to the programs to buy the Air Force 500-bed hospitals, the Army 1,000-bed general hospitals, and the Navy 250- and 500-bed hospitals. 1/ For the most part, these are to be used in the communications zone. However, for the Navy's program, we also included hospitals to support the Rapid Deployment Force (RDF) because, at the start of our work, the Navy had planned to buy essentially the same hospital, called fleet hospital, for this purpose. Since the submission of its fiscal year 1983 budget request, the Navy has altered this part of its program to include more mobile hospitals to be used in the combat zone.

1/For certain hospitals, the Navy plans, with minor modifications to the hospital core, to expand their capacity to 1,000 beds.

We conducted our work primarily in Washington, D.C., where we met with representatives of the Office of the Assistant Secretary of Defense, Health Affairs, to determine its role and responsibility in developing and coordinating the contingency hospital programs. We also spoke to representatives of various DOD coordinating groups to obtain information on their efforts. In addition, we met with representatives of the three military services responsible for the contingency hospital programs to discuss the development and progress of their programs. To the extent available, we obtained detailed information on their procurement schedules; the costs associated with buying, storing, and maintaining the hospitals; storage requirements and locations; and transportation, setup, and operational requirements.

We concentrated our efforts primarily on the use of contingency hospitals in a NATO scenario and, in this regard, met with representatives of the U.S. European Command and the Army, Air Force, and Navy in Europe to obtain information on wartime bed requirements; the status of host nation support agreements; and deployment requirements and locations of contingency hospitals within the communications zone.

SIGNIFICANT DIFFERENCES EXIST BETWEEN THE SERVICES' HOSPITAL PROGRAMS

Because the services' planning for contingency hospitals is ongoing, we were unable, with the time and information available, to make a definitive evaluation or comparison of their programs from either a cost or operational standpoint. DOD officials told us that, while the services are designing their own programs, contingency hospitals to be used in the communications zone have basically the same mission and should be similar. Nevertheless, although all costs are not known, a number of cost and operational differences in the services' programs are apparent.

Cost differences

None of the services had developed estimates for the total costs of their contingency hospital programs; however, hospital acquisition costs alone are estimated to be over \$1.3 billion through fiscal year 1988. As shown below, the procurement costs vary substantially among the services.

	Navy (note a)		Air Force	Army
Estimated costs (millions)	\$780.3		\$233.6	\$369.1
Estimated cost per hospital	\$23.4	\$28.0	\$7.5	\$20.5
Number of beds per hospital	250	500	500	1,000

a/This includes a number of hospitals for RDF, estimated to cost \$151.9 million. The total number of hospitals, beds, and estimated costs changed as of June 22, 1982. As of this date, the Navy received approval for a revised contingency hospital program estimated to cost \$508 million. The Navy's new program will include fewer hospitals with a different mix of combat and communications zone hospitals, larger (1,000 bed) hospitals, and increased use of existing buildings for hospitals to be pre-positioned.

A number of differences in the services' programs contribute to these procurement cost variations. First, the services have different approaches to providing shelters in which to set up their contingency hospitals placed in the communications zone. The amounts estimated for shelters by each of the services are shown below for comparison purposes.

<u>Service hospital</u>	<u>Procurement costs for shelters</u> (millions)
Army 1,000-bed	\$ 0
Air Force 500-bed	.4
Navy 250-bed (note a)	6.0
Navy 500-bed (note a)	7.2

a/Estimated amounts are for all shelters needed to house all hospital components, including the medical core, hospital support, and administrative support.

The Army plans to rely totally on existing buildings, many of which are presently occupied but will be vacated at the time of war. As a result, the Army has not budgeted any funds for shelters in which to set up its hospitals. The Air Force also plans to use existing buildings for many hospital functions, such as wards, staff housing, and dining facilities, but will buy a limited number of shelters, such as prefabricated units for its operating rooms and several tent-type passageways. In contrast, the Navy plans to buy

an extensive shelter system for its hospitals, consisting of panelized knockdown shelters and prefabricated units for the medical core, and a variety of tents for wards and staff housing. Although the Navy may reduce its shelter costs by using existing buildings for hospital support and/or base support services at predesignated locations, it still plans to procure shelters for the entire medical core.

In cases where the services plan to use existing buildings to shelter their hospitals, costs will be incurred to ready them for use. Therefore, although the Army and the Air Force may not have the same high procurement costs for shelters as the Navy, they will incur other expenses for improvements to existing buildings. Because few renovation costs have been identified, a complete cost comparison cannot be made.

A second major difference in the services' programs contributing to procurement cost variations is their different approaches to providing utilities. The Navy is planning to procure complete utility systems, including heating, air-conditioning, water storage, and sewage disposal. The Navy estimates these utility systems will cost about \$4.0 million for a 250-bed hospital and \$5.0 million for a 500-bed hospital. The Army and the Air Force have little, if any, utility procurement costs because they plan to take advantage of existing utility systems at deployment sites. However, costs to repair and/or upgrade the utility systems could be substantial, but are not known for all sites. As a result, a complete comparison of utility costs cannot be made.

A third reason for the differences in the services' procurement costs is due to variation in their medical equipment and supply costs. The following table shows each service's procurement cost for medical equipment and supplies.

<u>Service hospital</u>	<u>Procurement costs for medical equipment and supplies</u>
	(millions)
Air Force 500-bed	\$ 6.0
Navy 250-bed	8.2
Navy 500-bed	8.9
Army 1,000-bed	11.3

Although we did not conduct an item-by-item comparison of the hospitals' medical equipment and supplies, reasons for these procurement cost differences cited by service officials include:

- Navy's and Army's equipment and supplies support a wider range of medical subspecialties than those of the Air Force,

- Air Force's hospital is more surgery-intensive than that of the Army, and
- Army's medical equipment and supplies include estimates for high technology items, such as CT scanners, adding \$1.7 million to the cost.

Not all program costs are known

In addition to the estimated \$1.3 billion needed to procure contingency hospitals, the services will incur additional costs to prepare the sites where hospitals will be located, to build warehouses to store the hospitals, and to pay recurring expenses for leases, utilities, and maintenance of the buildings and sites. Other expenses, such as personnel costs for those assigned to manage the equipment and supplies at the sites, will probably be incurred.

Because the services have not finalized locations for all their hospitals and because detailed site surveys have been completed for only a few sites which have been identified, many of these associated program costs are not known. Costs to survey sites and make site improvements appear to be significant, but the services have only limited information on these costs. For example:

- The Air Force spent about \$32,000 for one site survey and estimated \$1.4 million will be needed for site improvements, such as repairing the building and upgrading the electrical, heating, ventilating, and air-conditioning systems. One-time costs to upgrade other sites are not fully known. The Air Force hopes to identify sites with adequate buildings for all its hospitals. However, at some approved sites it may be necessary to lease land and build warehouses to store the hospitals, at an estimated cost of about \$3.5 million per site.
- The Navy recently completed its design for contingency hospitals and estimated site improvements for each of two hospital sites to be \$2.3 and \$2.5 million. The hospital design contract and site surveys cost about \$2.4 million. The Navy has not determined where other hospitals will be located and, as a result, no other estimates are available.
- The Army had not conducted any detailed site surveys to estimate costs for site improvements. However, feasibility studies have indicated that expensive modifications might be needed for heating, electrical, and water distribution systems as well as to the buildings which would house operating rooms, intensive care wards, and dining facilities. Temporary buildings will be required to house the hospital core in certain cases.

Not only are one-time costs to prepare the sites for contingency hospitals often unknown, but estimates for annual recurring costs (e.g., utility and security) are generally unavailable. Only the Air Force was able to provide us with estimates of some of those costs and only at a few specific sites where hospitals are to be located. These recurring costs ranged from about \$172,000 to \$1 million annually at individual sites. The Army and the Navy could not provide similar estimates for annual recurring costs.

Operational differences

Each of the services is following a different peacetime storage strategy which will affect how quickly the hospitals can be set up and made operational in the event of war. The Air Force plans to pre-position its hospitals for the most part already setup. This strategy should enable the Air Force's hospitals to become operational quickly. The Army and the Navy, on the other hand, plan on storing their hospitals until a war breaks out. The Army plans to store its hospitals at a central depot in the United Kingdom and move them to preselected sites when needed, unless there are facilities and resources to store them onsite. The Navy plans to store some of its hospitals at pre-positioned sites but will not set them up until needed. The Army's and Navy's approach raises questions about their ability to respond in a timely manner because of the substantial resources required to transport and/or set up hospitals when wartime demands on these resources would be heavy. None of the services had tested its approach to determine if the hospitals can be ready when needed.

The Army and the Navy approaches will require substantial logistical support to transport and/or assemble their hospitals. For example, the Army estimates it will need 91 railroad cars and 114 trailers to move a 1,000-bed hospital from its storage depot in the United Kingdom to a site within that country where it will be used. Once on site, it estimates that about 245 personnel, many of whom are skilled workers, such as plumbers and electricians, will be needed to set up the hospital. The logistics requirements to move hospitals stored in the United Kingdom to other sites in Europe could be even greater. The Navy estimates a battalion of Seabees (630 personnel) would be needed to set up a complete hospital at its operational site. All of the services have requested support from the United Kingdom to assist in wartime hospital setup there, but no specific agreements have been completed.

The services do not have reliable information on how long it will take to activate their hospitals. Estimates vary from 7 to 10 days for the Air Force to make its setup hospitals fully operational, to a minimum of 28 days for the Army to move hospitals from the central depot to the hospital sites in the United Kingdom and then set them up, to 30 days for the Navy to assemble its hospitals onsite. The services have little experience on which

to base the above estimates. The Navy field-tested its hospital design, and about 30 days were needed to set up 40 percent of the hospital core. However, the Navy said that setup time was not a factor being tested. Although the Army used general hospitals during the Vietnam war, it was unable to provide historical data on the setup time needed. The Air Force has no experience on which to base its estimates.

Personnel requirements for operating the services' contingency hospitals also differ. The Air Force estimates that 765 personnel will be needed to operate its 500-bed hospital, the Army estimates 644 to operate its 1,000-bed general hospital, and the Navy estimates 1,163 to operate its 500-bed hospital. We did not have time to determine why there are such wide variances in personnel requirements.

COORDINATION AND STANDARDIZATION
EFFORTS NEED TIME TO DEVELOP

In its report on DOD fiscal year 1982 appropriations, the House Appropriations Committee expressed concern over the apparent lack of coordination among the services' contingency hospital programs. The absence of coordination was cited by the Committee as potentially causing overlap, duplication, and wasteful expenditures of money.

Not until recently have substantive actions been taken to improve coordination. Several multiservice coordinating groups have been established within DOD to promote coordination and standardization of wartime medical programs. Their work includes efforts directed at emphasizing cross-service sharing of hospitals by joint planning of bed-requirements and identifying common equipment and supplies for use in each service's hospitals. Also, under DOD's Assistant Secretary of Defense for Health Affairs, an office has been established to oversee military medical readiness activities. Although the Office of the Assistant Secretary can influence a service's program through the DOD budget process by challenging proposed expenditures, its role has been mainly advisory.

The ability of the Office of the Assistant Secretary to influence services' programs will be significantly expanded under the authority of a recently approved DOD Instruction prescribing policy and assigning responsibilities regarding the standardization and acquisition of deployable medical systems. Under the provisions of that Instruction, the Assistant Secretary will have the authority to prohibit service procurements of deployable medical systems not in compliance with yet-to-be-developed criteria governing such systems. The new DOD Instruction also gives the Assistant Secretary the responsibilities to

--approve the standardized field medical systems developed by the multiservice group responsible for that task and

--resolve, in consultation with the DOD Health Council, any deployable medical system standardization issue on which the services cannot agree.

This DOD Instruction appears to provide the necessary authority for promoting coordination and standardization of field medical systems. The services will have 120 days from the official date of issuance (printing date) to report on how they plan to implement this Instruction; the DOD Instruction had not been printed as of June 21, 1982.

These recent efforts have not yet significantly affected the services' programs and could require substantial time to do so. For example, an official involved in the multiservice effort to standardize the listing of equipment and supplies used in field hospitals estimated that it will take about 1 year to complete. Additional time can be expected for the services to incorporate such equipment and supplies into their procurement systems.

PLANNED PROCUREMENTS FOR FISCAL YEAR 1983

In fiscal year 1983, the Air Force plans to buy four 500-bed contingency hospitals, the Army plans to buy hospital equipment and supplies equaling three partial 1,000-bed general hospitals, and the Navy had proposed in its fiscal year 1983 budget to buy one 250-bed hospital and two 500-bed hospitals to support RDF. The estimated procurement costs for the services' fiscal year 1983 programs are \$21.1 million, 1/ \$55.4 million, and \$77.3 million, respectively.

Since its fiscal year 1983 budget submission, the Navy reconsidered the feasibility of using the same hospital design and shelters for the RDF and NATO scenarios and changed its program to include separate combat and communications zone "field" hospitals. The combat zone field hospital would provide a lower level of care and would consist mostly of tent-type facilities. The communications zone field hospitals remain essentially the same as the fleet hospital design. Because the precise costs of the combat zone hospitals were not known, the 1983 estimated budget for these hospitals was based on the cost of the original fleet hospitals' design. Subsequent lower cost estimates indicate that an additional 250-bed combat zone field hospital, originally programmed for fiscal year

1/This amount includes only the cost of medical equipment, supplies, and vehicle costs. Other associated costs, such as shelters, are not included.

1984, can be procured with the funds requested for fiscal year 1983. As a result, the Navy intends to procure a communications zone field hospital in fiscal year 1984, a year sooner than planned.

Navy officials told us that they have been standardizing their combat zone hospitals with the Air Force plans for RDF hospitals. The Navy now plans to combine much of the Air Force's RDF hospital equipment and supplies with the Navy's shelter design.

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The services plan substantial expenditures for contingency hospitals over the next several fiscal years. Major differences in the programs remain as well as many unknowns. Coordination and standardization efforts recently begun could help to eliminate unnecessary program differences and reduce costs, but need time to fully develop.

We plan to continue to monitor the services' programs and their coordination activities and trust that this report will be helpful to the Committee in its deliberations on the 1983 budget.

Sincerely yours,


Gregory J. Ahart
Director