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REPORT TO THE CONGRESS

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Better Planning And Management
Needed By The Veterans
Administration To Improve
Use Of Specialized
Medical Services

B-133044

*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

JUNE 18, 1974

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

B-133044

To the President of the Senate and the
Speaker of the House of Representatives

This is our report entitled "Better Planning and
Management Needed by the Veterans Administration to Improve
Use of Specialized Medical Services."

We made our review pursuant to the Budget and Accounting
Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act
of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director,
Office of Management and Budget, and to the Administrator of
Veterans Affairs.

A handwritten signature in cursive script that reads "Thomas P. Staats".

Comptroller General
of the United States

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ABBREVIATIONS

GAO	General Accounting Office
VA	Veterans Administration

Glossary of Terms

Hemodialysis	The use of an artificial kidney machine to cleanse the blood of persons whose kidneys do not function adequately.
Home care dialysis	A trained patient performs his own dialysis at home with assistance of a family member or attendant to monitor the treatment.
Satellite care dialysis	A trained patient, without a suitable home setting, performs his own dialysis at this facility with assistance of a medical person to monitor the treatment.
Limited care dialysis	A patient, with a stable medical condition, who is not capable of being trained to perform his own dialysis is dialyzed at this facility with assistance of reduced medical staff.
Peritoneal dialysis	An alternative to hemodialysis. A process by which a fluid is introduced into the abdomen using the peritoneum membrane lining the abdominal wall as a filter.
Kidney transplantation	The replacement of nonfunctioning kidneys with organs from live or cadaver donors.
Supervoltage therapy	Sometimes called radiation therapy; the use of equipment, such as cobalt machines, which generate in excess of 1 million volts of energy to treat cancer and related disorders.

D I G E S T

WHY THE REVIEW WAS MADE

Because of the importance and cost of health care services, GAO reviewed selected specialized medical service programs of the Veterans Administration (VA) to see if better planning and management could improve these programs. VA reported costs of over \$316 million in fiscal year 1973 for specialized medical service programs.

FINDINGS AND CONCLUSIONS

VA defines specialized medical services as "diagnostic or treatment modalities" which

- are newly emerging services from developmental and research studies or
- require specialized personnel or facilities.

VA has allowed hospitals to establish and operate specialized medical services, although many are underused and duplicate existing facilities. GAO believes VA could improve the management and operation of its specialized medical programs.

GAO found that:

- VA established specialized medical services which duplicated existing services without adequately determining patient need.

As a result some specialized service facilities are underused. For example, cancer treating super-voltage equipment was less than 50 percent used at four of eight facilities reviewed. (See p. 10.)

- VA has not adequately controlled the expansion of its specialized medical service programs. For example, the VA Central Office issued criteria for establishing kidney transplant units which stated, in part, that for VA to approve a transplant center it must be demonstrated that the VA transplant team will perform 20 to 25 transplants a year. Furthermore, VA officials said that the VA kidney transplant advisory committee, which approves the establishment of kidney transplant units, would, in some cases, approve units that could perform 12 transplants a year. However, during fiscal year 1972, transplants were performed at 27 VA hospitals. Of these, 21 performed less than 20 transplants and 18 performed less than 12 transplants.
- One VA hospital spent \$465,000 over a 3-year period to conduct a kidney transplant program. However, only two transplants were performed during that period. (See p. 18.)
- According to VA physicians, about 70 percent of patients being dialyzed in highly staffed hospital

centers were suitable for hemodialysis treatment in lower care settings requiring less professional staffing. VA has not, however, provided an adequate number of facilities for this less costly care. Also, VA staffing guidelines for hemodialysis treatment services have not been updated to take advantage of economies made possible by changes in equipment and methods of treating patients. (See p. 25.)

of the veteran population served by the hospital, disease incidence statistics, and other relevant data. (See p. 15.)

Kidney transplants

- Evaluate the program to redetermine the number and locations of transplant centers needed and discontinue existing services which cannot be expected to meet VA workload criteria. (See p. 21.)
- Require that future proposals to acquire transplant capability identify the (1) availability of nearby VA and community resources which could be shared, (2) expected supply of donor kidneys, and (3) estimated demand for kidney transplants by veterans in the area. (See p. 21.)

RECOMMENDATIONS

VA should establish, maintain, and periodically review criteria and guidelines for development of specialized programs, enforce the criteria and guidelines, and provide the information necessary to periodically evaluate the effectiveness of the programs. (See p. 9.)

Hemodialysis

More specifically, for the specialized services which GAO reviewed, VA should:

- Determine the number of patients which could be transferred to limited care dialysis and, if appropriate, make such care an integral part of the VA hemodialysis program.
- Revise staffing guidelines to take advantage of economies made possible by changes in equipment and methods of treating patients. (See p. 21.)

Supervoltage therapy

--Evaluate existing facilities and decommission duplicative or underused facilities by (1) consolidating services, where possible, at VA hospitals within metropolitan areas and (2) closing underused services when the services are available at other Federal or community hospitals in the area. (See p. 15.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

--Require that the justification for new equipment and facilities identify the (1) location and use of similar VA, other Federal, and community equipment and facilities within a prescribed distance and (2) patient demand for the service to be provided on the basis

VA said that GAO's study has provided additional insight into its specialized medical service programs. VA generally concurred with GAO's recommendations and commented on actions taken or planned to implement them. (See pp. 9, 16, 22, and 31.)

VA said that, although it plans to have limited care hemodialysis capability at all of its hemodialysis centers in fiscal year 1975, it did not believe limited care hemodialysis would be appropriate for patients who are untrainable in self-dialysis.

VA should reconsider including patients untrainable for self-dialysis in its concept of limited care. In 1972 VA medical advisory committees in New York and Chicago, in reports to the VA Central Office, said about 70 to 80 percent of dialysis patients are able to receive treatment in settings less

costly than highly staffed hospital centers.

The reports said about 50 percent of these patients are untrainable for self-dialysis but are suitable for treatment in settings with reduced medical assistance--limited care. (See p. 31.)

MATTERS FOR CONSIDERATION
BY THE CONGRESS

This report informs the Congress of opportunities that exist for VA to improve the use of its specialized medical services.

CHAPTER 1

INTRODUCTION

Section 612 of title 38 of the United States Code provides that veterans who have medical disabilities which are incurred or aggravated in the line of military duty are entitled to all reasonable medical services necessary to treat such disabilities. Veterans are also entitled to medical care for nonservice-connected conditions without regard to their ability to pay, if they (1) are released or discharged from military service for disabilities incurred or aggravated in the line of duty, (2) have compensable service-connected disabilities, or (3) are 65 years of age or older. Veterans who were in military service after January 31, 1955, may be provided similar treatment if they certify that they are unable to pay.

The Department of Medicine and Surgery of the Veterans Administration (VA) has administrative responsibility for the VA's health care system, including the operation of 170 hospitals, some of which provide specialized medical services such as hemodialysis, kidney transplants, and super-voltage therapy.

In 1966, because of the increasing cost to provide health care services, the Congress expressed its desire that medical facilities be used effectively and efficiently. Public Law 89-785 (38 U.S.C. 5053) authorized VA to enter into agreements with other medical community hospitals to share specialized medical resources when (1) this would prevent the need for a similar VA resource or (2) existing VA facilities were not being used to their maximum effective capacity.

Although Public Law 89-785 was enacted in 1966, VA officials advised us that problems in obtaining funds delayed its implementation for about 3 years. As a result of the delay in implementing the law, availability of community capability was not recognized in certain specialized medical services.

VA officials also advised us that, in the early years of the law, the presence of skilled staff at a VA hospital and the influence of medical schools may have affected the

location of certain specialized medical services. However, VA officials stated that these factors will not be permitted to determine where specialized medical services will be established in the future.

To enhance VA participation in community health care planning, Public Law 91-515, dated October 30, 1970, amended the Public Health Services Act to provide for a VA representative to serve as an ex officio member on the Council for Comprehensive State Health Planning and on each Regional Medical Advisory Group. In December 1970 VA appointed representatives to serve on these groups.

VA has established specialized medical programs which are defined as either "diagnostic or treatment modalities" which (1) are newly emerging services from developmental and research studies or (2) require specialized personnel or facilities. We reviewed hemodialysis, kidney transplants, supervoltage therapy, and spinal injury treatment centers because these specialized medical services have been expanded within the last several years and have been the subject of congressional interest.

Our review of spinal cord injury treatment centers is discussed in a separate report entitled "Complications Incurred Because of Delays in Transferring Patients to VA Spinal Cord Injury Treatment Centers" (B-133044, Mar. 20, 1974). Also one of VA's other specialized medical services--open-heart-surgery centers--is discussed in a report entitled "Low Use of Open-Heart-Surgery Centers at VA Hospitals" (B-133044, June 29, 1972).

The following table shows that the costs of providing these services and other specialized medical services have increased in recent years. The table also shows the costs VA reported for specialized medical services provided by VA to community hospitals and services provided by community hospitals to VA.

<u>Services reviewed</u>	<u>Reported costs</u>		
	<u>1971</u>	<u>1972</u>	<u>1973</u>
	<u>(millions)</u>		
Hemodialysis	\$ 15.4	\$ 23.4	\$ 30.5
Kidney transplants	1.0	2.3	3.4
Supervoltage therapy	1.6	2.1	2.2
Spinal cord injury	<u>20.2</u>	<u>29.7</u>	<u>34.6</u>
Total	<u>\$ 38.2</u>	<u>\$ 57.5</u>	<u>\$ 70.7</u>
All specialized services (note a)	<u>\$165.4</u>	<u>\$242.7</u>	<u>\$316.6</u>
Services provided by VA to community hospitals and by community hospitals to VA	<u>\$ 1.6</u>	<u>\$ 2.5</u>	<u>\$ 4.5</u>

^a See app. III.

SCOPE OF REVIEW

We made our review of specialized medical services at nine VA hospitals in California, Illinois, New York, Wisconsin, New Jersey, and at the VA Central Office in Washington, D.C. We selected hospitals in urban areas because of the concentration of VA specialized medical facilities in large cities. We also performed work at community hospitals in those areas. Appendix II lists the VA hospitals visited.

CHAPTER 2

IMPROVEMENTS NEEDED IN CENTRAL OFFICE MANAGEMENT

OF SPECIALIZED MEDICAL SERVICES

The VA Central Office could improve its management in establishing and operating its specialized medical service programs. These programs require the acquisition of expensive and sophisticated medical equipment and the use of specially trained physicians, clinicians, and technicians which in some cases are in short supply.

VA established a policy that most specialized medical services be planned and provided on a regional or multi-regional basis so that specialized services available at other VA hospitals or community hospitals are not duplicated. Some specialized medical services, such as surgical, medical, and coronary intensive care units which are required by most VA hospitals, are exempt from the policy. However, much of the impetus for establishing specialized medical services has come from individual hospitals without adequately considering the availability of identical services at other VA or non-VA hospitals in the community.

Our review of individual VA hospital proposals to the VA Central Office for establishing specialized medical services showed that they usually did not provide information-- such as estimates of patient demand based on incidence rates or other factual bases, or identifications of nearby facilities already providing the service--that the VA Central Office needed to adequately implement its policy. The VA Central Office has allowed hospitals to establish and operate these services even though many are underused and duplicate existing services.

The results of our review of supervoltage therapy, kidney transplants, and hemodialysis demonstrate the need for the VA Central Office to take a stronger role in establishing and continuing all specialized medical services. The detailed results of our review of these three services are discussed in chapters 3 to 5.

VA officials agreed that adequate consideration had not been given to the availability of specialized medical resources in the community. However, they said planning for

specialized medical programs is currently being emphasized on a VA Medical District basis to minimize unnecessary duplication of resources, personnel, and facilities.

CONCLUSIONS

Periodic review and enforcement of appropriate criteria are necessary for proper development and location of specialized medical service programs. Such criteria should require minimum levels of local or national patient demand to justify starting and continuing a service and adequately assess the possibility of using facilities at other VA or community hospitals. Also management should be provided with the kinds of information necessary to measure the effectiveness of the programs at the hospital level.

RECOMMENDATION

We recommend that the Administrator of Veterans Affairs require that the Department of Medicine and Surgery establish, maintain, and periodically review criteria and guidelines for developing specialized medical service programs, enforce the criteria and guidelines, and provide the information necessary to periodically evaluate the effectiveness of the programs.

AGENCY COMMENTS

VA stated that, although certain specialized medical programs have been highly beneficial to patient care and have been successful in bringing new modalities of diagnosis and treatment to bear with minimal disruption of ongoing operations, it recognizes that there have been some deficiencies in the acquisition, deployment, and control of some specialized programs.

It stated also that many of the shortcomings were the direct result of the relatively rapid progression of specialized medical programs and the unavailability of information on community needs and resources. VA agreed with our recommendations to establish, review, and maintain adequate criteria and guidelines for these programs and to periodically evaluate the effectiveness of the programs.

CHAPTER 3

NEED FOR VA CENTRAL OFFICE TO MORE CLOSELY EXAMINE

THE ESTABLISHMENT AND USE OF

SUPERVOLTAGE THERAPY SERVICES

Supervoltage therapy, used principally in the treatment of cancer patients, involves the use of supervoltage equipment--such as cobalt therapy equipment, linear accelerators, and betatron units--and requires the use of specially trained medical personnel. The cost of the equipment required for supervoltage therapy ranges from \$50,000 to \$500,000 or more for each unit. As of June 30, 1973, VA had supervoltage therapy units at 23 hospitals.

We reviewed eight of the hospitals that had established units and found that VA had permitted the hospitals to establish supervoltage therapy services without adequately evaluating the need for the services. This resulted in underuse of supervoltage equipment in some cases and unnecessary duplication of services available at other VA and community hospitals.

Information furnished us by hospital officials on hospital capacity to provide supervoltage therapy and on the number of patients being treated daily showed that use of facilities ranged between 30 and 100 percent of capacity, as shown in the following schedule.

Workload of Supervoltage Services

<u>VA hospitals</u>	<u>Number of patients that could be treated daily</u>	<u>Average number of patients being treated daily</u>	<u>Percent</u>
Bronx, New York	50	15	30
Brooklyn, New York	30	13	43
Manhattan, New York	20	20	100
East Orange, New Jersey	<u>30</u>	^a 25	<u>83</u>
New York area hospitals	<u>130</u>	<u>73</u>	<u>56</u>
Research, Illinois	60	20	33
Hines, Illinois	<u>45</u>	^a 40	<u>89</u>
Chicago area hospitals	<u>105</u>	<u>60</u>	<u>57</u>
Wood, Wisconsin	60	20	33
Long Beach, California	30	20	67

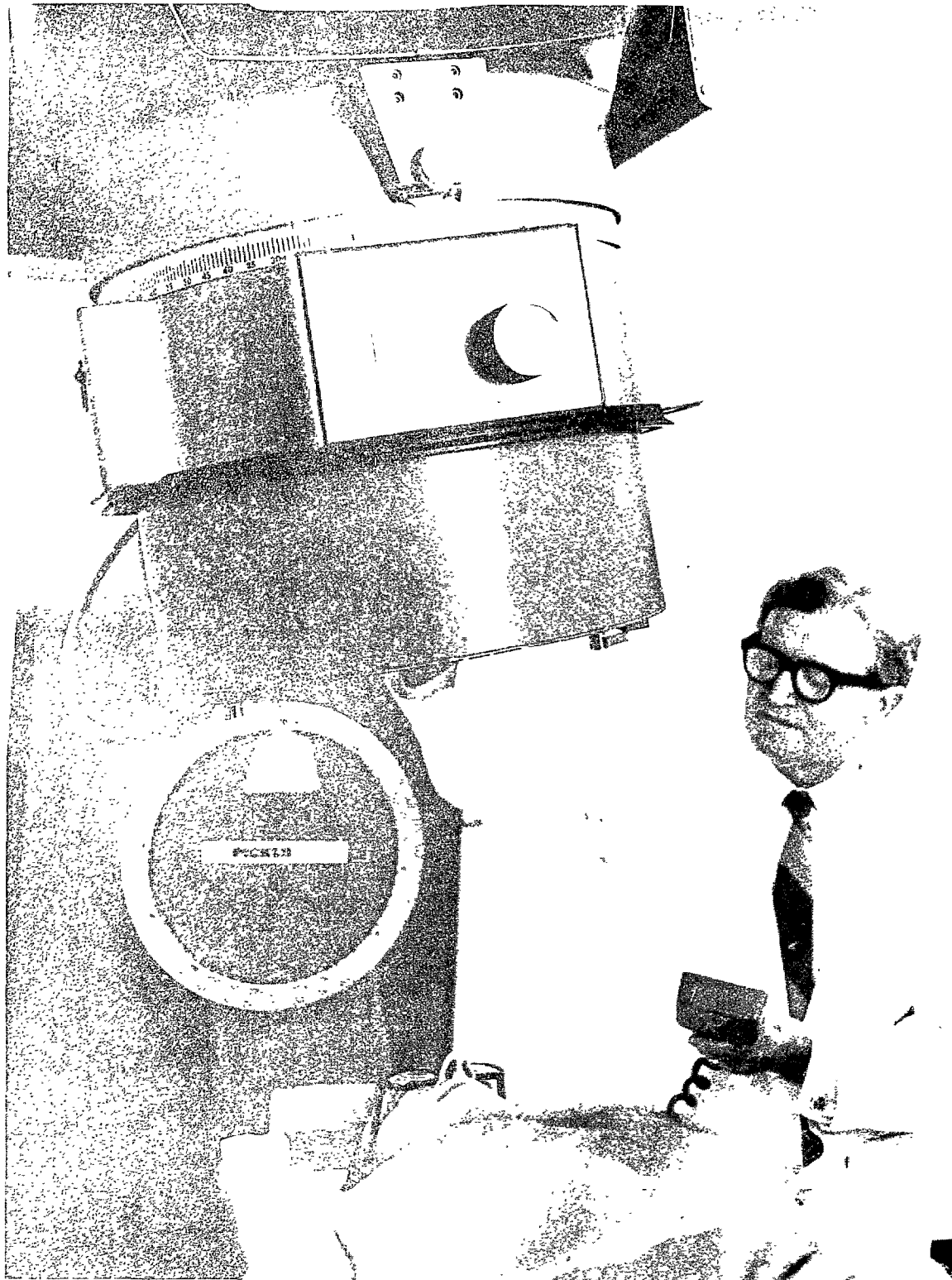
^aVA officials advised us that the number of patients being treated at this hospital has increased.

PATIENT POSITIONED FOR TREATMENT WITH THE
BETATRON SUPERVOLTAGE THERAPY APPARATUS



Source Medical Illustration Service, VA Hospital, Bronx, New York

PHYSICIAN ADJUSTS COBALT THERAPY EQUIPMENT
FOR SUPERVOLTAGE TREATMENT OF PATIENT



Source. Medical Illustration Service, VA Hospital, Bronx, New York

USE OF EXISTING FACILITIES AT
NEARBY HOSPITALS SHOULD BE CONSIDERED

VA policy requires that hospital proposals for supervoltage therapy facilities consider the availability of existing facilities at nearby VA and local hospitals. However, the proposals submitted for the six most recently acquired supervoltage therapy machines at the hospitals reviewed did not identify the availability of supervoltage therapy services at VA or other local hospitals or adequately demonstrate the need for additional facilities on the basis of patient needs.

We found no evidence that VA had required its hospitals to provide this information to support the requests for equipment. For example, in 1971 VA installed a betatron facility costing over \$300,000 at the Bronx VA Hospital. The hospital justified the facility on the basis that it needed to supplement its existing cobalt service to better accommodate patients being referred from other New York area VA hospitals.

After VA's decision to install the betatron at the Bronx Hospital, cobalt machines were acquired at two VA hospitals (East Orange and Brooklyn) within 15 miles of the Bronx facility. The Bronx Hospital experienced an increasing workload until cobalt units were installed at the East Orange and Brooklyn Hospitals in 1970 and 1971. According to the chief of the Bronx supervoltage therapy service, 50 percent of his patients had been referred from the East Orange and Brooklyn Hospitals.

As a result of adding these facilities at the two nearby VA hospitals, the anticipated workload at the Bronx Hospital did not materialize and the hospital had to seek referrals of nonveteran patients to increase the betatron use.

Officials of regional medical planning agencies in New York and New Jersey--private groups which review all major equipment acquisitions planned by non-Federal hospitals in the region--advised us that an excess of supervoltage therapy equipment including four betatrons, existed in the area. Therefore it is unlikely that many private patients will be referred to the Bronx facility.

VA has similarly allowed two hospitals in the Chicago area to install supervoltage equipment. VA supervoltage capability at hospitals in this area has expanded as follows:

- 1954--Chicago Research Hospital acquired a cobalt machine and an X-ray machine capable of supervoltage therapy.
- 1970--Betatron was installed at Hines Hospital.
- 1970--Chicago Research Hospital supplemented old equipment with a new cobalt machine.
- 1973--A cobalt machine is being installed at Hines Hospital to supplement betatron.

An analysis of the proposal that Hines Hospital submitted to the VA Central Office in April 1970 for the acquisition of the cobalt machine being installed in 1973 showed that the hospital based its need for the additional supervoltage capability on an increasing workload. However, in its proposal the hospital did not advise the VA Central Office management that:

- A study the local private hospital planning agency made for the Chicago area in 1969 showed that 18 of 33 supervoltage facilities in the Chicago area were underused.
- The cobalt machine at Chicago Research Hospital--15 miles from Hines--was less than 50 percent used.
- Two supervoltage machines at the medical school affiliated with Hines were operating at less than 50 percent of capacity.

In contrast to the Chicago and New York areas, the newly constructed VA hospital in San Diego does not operate a supervoltage therapy service. Veterans needing radiation therapy are treated at an affiliated university medical school.

Physicians at the university and the VA hospital agree that treating VA patients at the university hospital is advantageous to both hospitals and has worked well; use of the university's equipment increased and the current VA caseload did not justify installing costly equipment at the VA hospital.

VA officials advised us that they were continually evaluating the supervoltage therapy services provided throughout the VA system, affiliated universities, and local communities with the goal of treating patients in the most efficient, professional, and economical manner possible. For example, they advised us that the planned installation of a supervoltage therapy service at the Houston VA Hospital was discussed with the local comprehensive health planning group, and the group approved it.

CONCLUSIONS

VA has permitted its hospitals to establish supervoltage therapy services without adequately determining the need for the services. These services have been often underused--less than 50 percent of capacity used at four of eight facilities reviewed--and in some cases, unnecessarily duplicated services available at other VA hospitals and community medical facilities.

RECOMMENDATIONS

To avoid establishing unnecessary supervoltage therapy services, we recommend that the Administrator of Veterans Affairs:

- Evaluate existing facilities and decommission duplicative or underused facilities by (1) consolidating services, where possible, at VA hospitals within metropolitan areas and (2) closing underused services when the services are available at other Federal or community hospitals in the area.
- Require that the justification for new equipment and facilities identify the (1) location and use of similar VA, other Federal, and community equipment and facilities within a prescribed distance and (2) patient demand for the service to be provided on the basis of veteran population served by the hospital, disease incidence statistics, and other relevant data.

AGENCY COMMENTS

VA agreed with our recommendations and advised us that it had already taken action to close some units and consolidate others. VA also is considering terminating or phasing out supervoltage services being provided at Manhattan VA Hospital and Research Hospital.

CHAPTER 4

TOO MANY VA HOSPITALS PERFORMING KIDNEY TRANSPLANTS

Kidney transplant services were underused at most VA hospitals during fiscal year 1972. The following factors were the principal causes for low use:

- The VA Central Office approved hospital requests for funds to establish units, although it was not demonstrated that sufficient veteran demand existed to support a transplant service or that a sufficient number of donor kidneys could be obtained.
- Proposals were submitted and approved without adequately considering the availability of kidney transplant capabilities at nearby VA or community hospitals.
- Hospitals without specific funding approval from the VA Central Office were allowed to establish and operate transplant units with their general hospital funds, although there was little demand for such services and transplant capabilities existed at nearby VA or community hospitals.
- There was a shortage of donor kidneys available.

LOW USE OF KIDNEY TRANSPLANT UNITS

Replacing nonfunctioning kidneys with organs from cadavers or live donors developed from an experimental technique into an accepted medical procedure in the early 1960s. VA was a major contributor to developing this procedure and has continued to expand its kidney transplant program.

In November 1969 a VA task force prepared a report suggesting a minimum of 25 transplants a year be done at each unit. In April 1971 the VA Central Office issued criteria for establishing kidney transplant units which stated, in part, that for VA to approve a transplant center it must be demonstrated that the VA transplant team will perform 20 to 25 transplants annually.

VA officials advised us that the VA kidney transplant advisory committee, which approves establishment of kidney transplant units, would, in some cases, approve units that could perform 12 transplants a year. During fiscal year 1972 transplants were performed at 27 VA hospitals. Of these, 21 performed less than 20 transplants and 18 performed less than 12 transplants.

Of the nine VA hospitals we visited, three performed kidney transplants and two others had submitted proposals requesting approval for this service. Our review at the hospitals involved in kidney transplants showed the following.

New York area

In 1969, VA approved a proposal by the Manhattan VA hospital for funds to establish and operate a transplant unit. As of June 30, 1972, about 3 years after the unit was approved, it had performed only two transplants. During this period VA provided \$465,000 for the unit.

The hospital's proposal to the VA Central Office to establish a kidney transplant unit did not (1) identify all other transplant services available in the city or (2) project the number of donor kidneys that could be expected to become available for transplant. We were advised that using the transplant capabilities at other hospitals was not considered as an alternative to establishing the hospital's own unit.

We discussed the problem of low use of the unit with the Chief of the Surgical Service at the hospital. He said that low use was caused by a shortage of donor kidneys for transplant. He also said too many hospitals in the New York area were providing transplant services. Data available at the local health planning council showed that 14 hospitals in the city had kidney transplant units and only 2 had performed more than 20 transplants in 1971.

VA officials advised us that, after our review at the Manhattan VA Hospital, the VA Central Office withdrew funds for its transplant program since no significant number of transplants had been performed at the hospital. The officials advised us also that the hospital is no longer considered a part of the kidney transplant program.

Chicago area

Our review of two VA hospitals in the Chicago area--Hines Hospital and Research Hospital--indicated that VA's policy for planning specialized medical services on a regional basis had not been followed. Both hospitals, with the VA Central Office's permission, established and operated kidney transplant units. Moreover, these units were established, even though two private hospitals in the city had well-established kidney transplant units.

In July 1971 Hines requested funds to establish a kidney transplant unit. In its proposal, Hines estimated that the unit would perform 40 transplants a year. In September 1971 VA advised the hospital that its request for funds was disapproved. Even though denying the request for funds, VA encouraged the hospital to develop a pilot transplant service without special funds. This is not unusual as only 12 of the 27 VA hospitals performing transplants were specifically funded. The hospital accepted this suggestion and implemented a kidney transplant program in fiscal year 1972.

Research Hospital requested funds for a transplant unit in June 1967. In August 1969 VA permitted the hospital to do transplants without special funds, and the hospital performed two transplants in fiscal year 1970. Again in March and June 1971 the hospital requested funds, estimating that 30 to 50 transplants would be performed annually. In November 1971 VA advised the hospital that its June 1971 request was denied. In March 1972, however, VA approved funds for a transplant unit to begin in fiscal year 1973. The VA Central Office said the continuation of the transplant unit would be reevaluated on the basis of transplant volume.

Although VA provided funds for a transplant unit at Research, there is no evidence that shows VA considered the impact the unit would have on continuing the transplant program at Hines, which is about 15 miles away.

The proposals submitted to VA by these two hospitals did not discuss the availability of kidney transplant services at nearby private hospitals or the availability of donor kidneys. According to regional medical program statistics, about 100 kidneys have been donated per year in Illinois. During fiscal year 1972, only 70 transplants (24 in VA hospitals) were performed in the entire State.

Because of the limited number of donor kidneys available each year, it is unrealistic to believe that the VA hospitals would perform 65 transplants a year as suggested in their latest proposals. This would represent about 93 percent of all kidney transplants in the State. In fiscal year 1972 VA hospitals performed only 24 transplants, or about 33 percent of the transplants performed.

Southern California area

The Wadsworth VA Hospital in Los Angeles established a transplant unit in 1962, and by June 30, 1972, had performed about 100 transplants, an average of about 10 each year.

In 1972 the San Diego and Long Beach VA Hospitals submitted proposals requesting the establishment of kidney transplant services. These proposals were still pending at the end of our review. If they are approved, three VA hospitals will be approved to perform transplants in the Southern California area.

The San Diego and Long Beach Hospitals did not provide information in their proposals on the availability of existing transplant programs in the area, nor did they discuss the availability of donor kidneys. Both hospitals proposed to perform at least 25 transplants a year but did not provide any information to support this estimate.

During fiscal year 1973, Long Beach Hospital performed three transplants using general hospital funds. The hospital did not inform the VA Central Office about the transplants. San Diego Hospital referred its transplant patients to an affiliated community hospital. VA reimbursed the community hospital by direct payment. Physicians at the VA and the community hospital advised us that these arrangements have worked satisfactorily.

The cost of a transplant operation and related care ranged from \$10,000 to \$15,000 at the community hospital, depending on the length of time the patient was hospitalized. VA Central Office budget guidelines show that the average cost of performing a transplant at VA hospitals is about \$16,000, based on annual funding of about \$400,000 and a minimum workload of 25 operations.

VA officials agreed there was no need for three hospitals in Southern California to be performing operations. However, because of the earthquake, the Wadsworth Hospital reduced operations, and transplants are being performed at the Long Beach VA Hospital and are contracted out by the San Diego VA Hospital as an expediency until such time as the Wadsworth Hospital resumes full operations.

CONCLUSIONS

Many of the transplant units at VA Hospitals are underused. The principal causes for the low use have resulted because (1) requests to establish units were approved, although demand for the service and the availability of donor organs were not demonstrated, and (2) hospitals were permitted to perform transplants, although they were not designated transplant units. Moreover, VA did not adequately consider the availability of transplant services at other VA and community hospitals before starting a transplant unit. In those instances where VA hospitals used available transplant services, the arrangements worked well and costs were comparable.

VA hospitals are not required to include in their proposals for establishing kidney transplant units (1) information concerning the availability of existing VA and community transplant services or (2) the number of donor kidneys which could be expected. As a result, VA's ability to assess the merits of the proposals has been limited.

RECOMMENDATIONS

We recommend that the Administrator of Veterans Affairs evaluate VA's kidney transplant program in the light of experience to date to redetermine the number and locations of transplant centers and to discontinue existing services which cannot be expected to meet VA workload criteria.

We further recommend that the Administrator require that all future proposals, submitted by individual VA hospitals to acquire kidney transplant capability, identify the (1) availability of nearby VA and community resources which could be shared, (2) expected supply of donor kidneys, and (3) estimated demand for kidney transplants in the area.

AGENCY COMMENTS AND GAO EVALUATION

VA stated that our recommendations were acceptable. However, it said that every donor kidney that becomes available in the entire country is equally available to any potential recipient, VA or non-VA, regardless of his geographic location or the size of the unit in which he is located as long as his unit has joined the registry within which the kidney becomes available.

We agree that hospitals that have joined the registry become eligible for donor kidneys regardless of geographic location. However, as pointed out to us at the hospitals we visited, there is a shortage of kidneys. Therefore VA should consider the availability of donor kidneys before establishing transplant facilities at its hospitals. The VA Chief Medical Director, in testimony given before the Subcommittee on Housing and Urban Development--Space--Science--Veterans, House Appropriations Committee, in March 1973 stated that there is a tremendous difficulty in obtaining suitable kidneys for transplants and that VA may find it appropriate to reduce the number of centers which are operational simply because a shortage of donor kidneys exists. He further stated that many other hospitals have developed transplant capability and this is an area where duplication can be eliminated by sharing facilities.

CHAPTER 5

OPPORTUNITIES EXIST FOR TREATING PATIENTS

AT LESS COSTLY HEMODIALYSIS FACILITIES

Many veterans with stabilized medical conditions are being dialyzed in highly staffed and costly hospital centers. These patients could receive treatment in less costly, lower care settings. VA is expanding its capability and capacity to serve those patients who can be trained to perform their own dialysis, with limited medical assistance, at home or at satellite settings.

Other patients with stabilized medical conditions--those who are untrainable--could also receive treatment in lower care settings with reduced medical assistance. However, VA has not provided for such facilities within its hemodialysis program, and these patients remain in highly staffed hospital centers. Hospital center beds fill because of the low turnover, and other patients in need of this higher level of care may not be able to receive it.

Using dialysis machines in treating patients with chronic kidney failure is a relatively new concept. Initially all patients were hospitalized for dialysis. Because of the high cost and social and psychological disadvantages of continued hospitalization, hospital personnel began to train certain patients so that they could perform the required dialysis at home with someone's assistance (usually a family member). VA pays all the costs a veteran incurs by performing his own dialysis at home.

Hemodialysis must be performed several times each week. It is a treatment and not a cure; therefore, patients require care until they receive a successful kidney transplant or die. Dialysis can extend the life of a patient with kidney failure for 10 years or more. However, unless patients are moved from the highly staffed hospital settings, these treatment facilities soon fill to capacity.

The concept of home dialysis appeared at one time to be a solution to the patient turnover problem. However, the

applicability of home dialysis has been limited by several factors, including:

1. Some patients are unable to learn how to dialyze themselves.
2. Some patients refuse to go on home dialysis for psychological reasons, for example, they
 - cannot insert needles in themselves;
 - feel "unsafe" out of the hospital setting; or
 - do not want to bring any reminder (equipment, etc.) of their illness into their homes.
3. Some patients do not have suitable home settings because
 - no family member is home to assist them;
 - they live in apartments and cannot make the necessary plumbing and electrical modifications; or
 - due to a large family or a small home, no space is available to devote to dialysis.

Two additional treatment settings have evolved in an attempt to overcome some of the obstacles to home dialysis. One is the establishment of satellite dialysis facilities to accommodate those patients who can be trained to dialyze themselves but have unsuitable home settings. Patients go to a hospital or other facility which has the necessary equipment and dialyze themselves. Limited medical personnel are available to monitor the treatment. The other treatment modality which has evolved is called limited care. Limited care is used for untrainable patients whose medical condition has stabilized. The number of medical personnel required to perform dialysis for these patients is also lower than that required for unstable patients who need the highly staffed hospital settings.

HEMODIALYSIS TREATMENT COST CAN BE LOWERED
FOR MANY PATIENTS

VA's dialysis program is concentrated around either the hospital setting or home dialysis. Although VA has recently developed and expanded satellite dialysis, it has not provided limited care dialysis for medically stable but untrainable patients. As of March 1973, VA offered hemodialysis at 44 of its hospitals and was treating a total of 1,771 veterans. The following schedule shows some specifics for the various treatment settings in the VA dialysis program.

Type of dialysis setting	<u>Beds</u>	<u>Patients</u>	Approximate annual costs per patient (<u>note b</u>)	VA personnel guidelines <u>per bed</u>
Hospital center (note a)	501	843	\$20,000	2.5
Satellite	24	162	\$10,000 to \$12,000	1.1
Home	-	766	\$ 5,000 to \$ 7,000	-

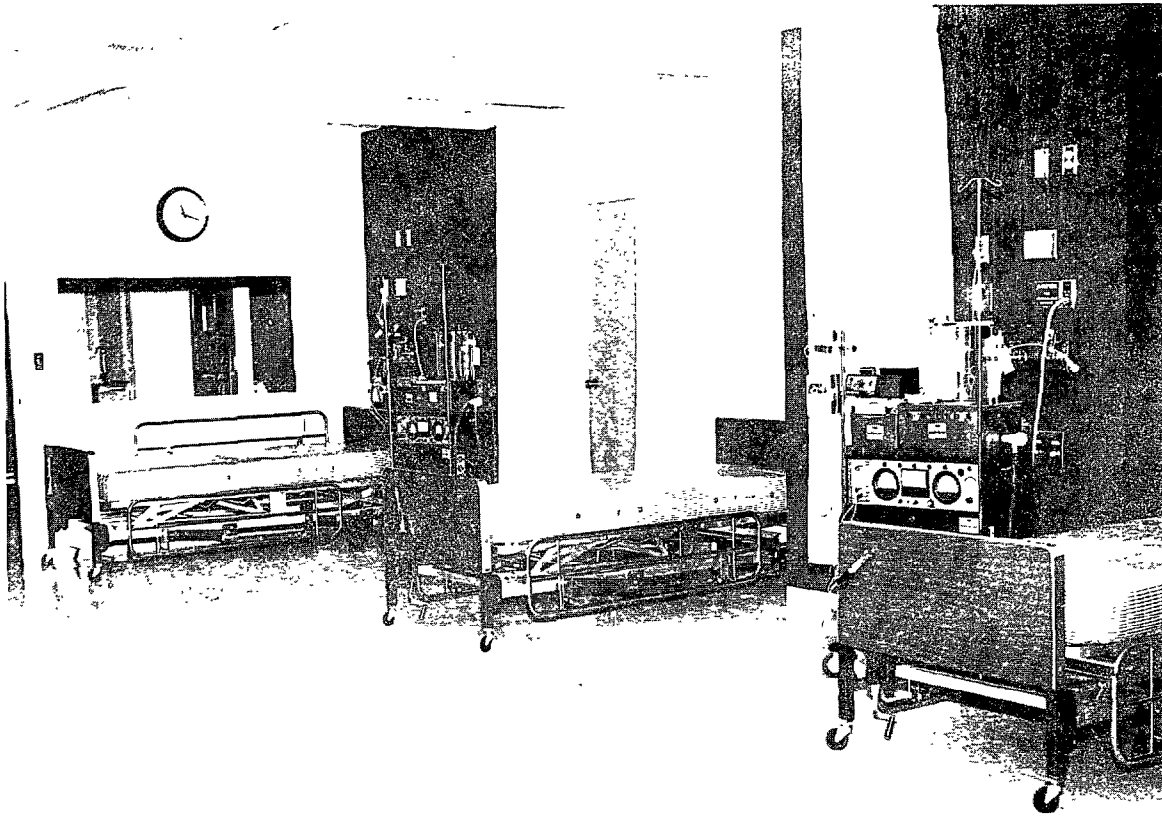
^aIncludes beds used for training and patients being trained for home dialysis.

^bVA funding guidelines.

VA medical advisory committees in New York and Chicago stated in 1972 reports to VA that about 70 to 80 percent of dialysis patients are able to receive treatment in settings less costly than the highly staffed hospital centers. The committees estimated that medical personnel for the care of these patients could be reduced by about one-third.

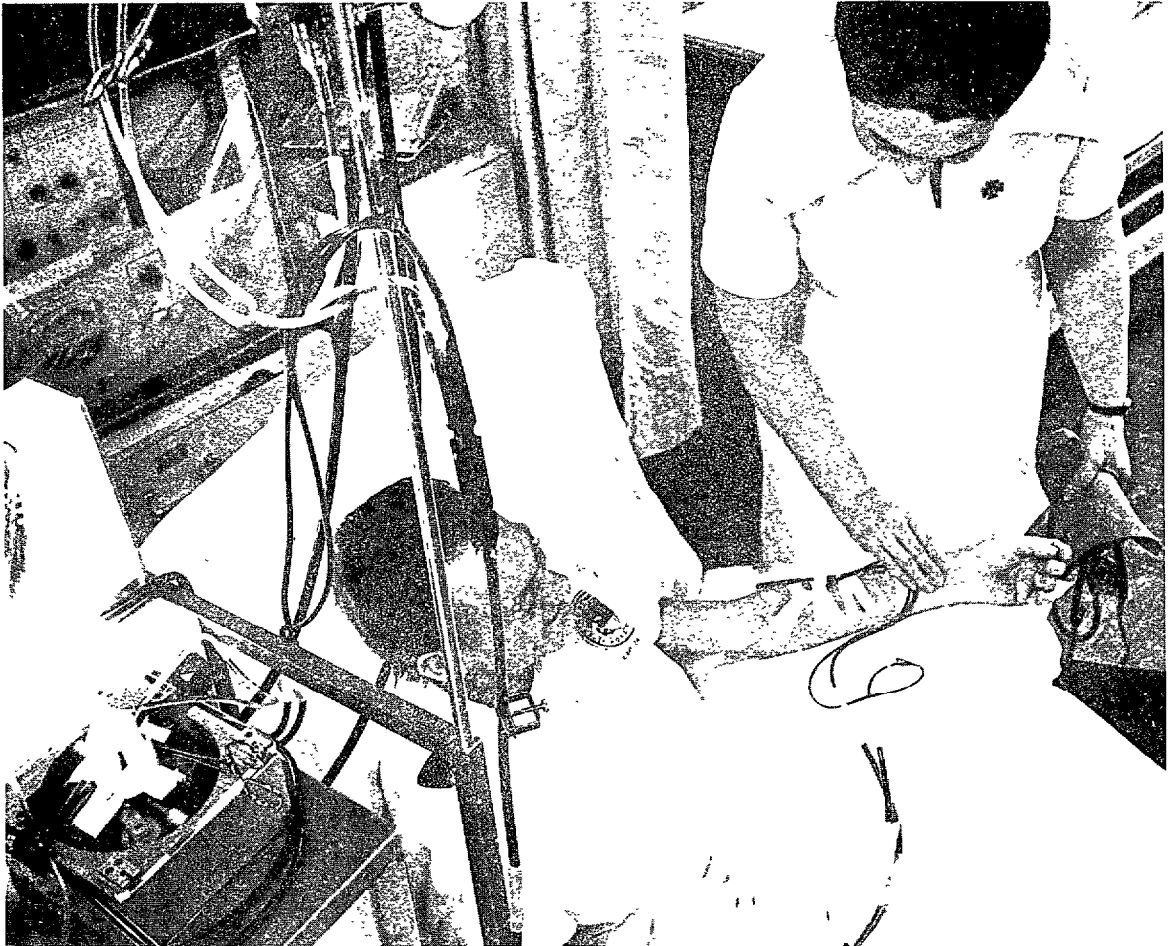
About half the patients who do not require center dialysis are likely candidates for self-dialysis at home or satellite facilities. The remainder are patients with stable medical conditions who are untrainable for self-dialysis for psychological and social reasons. These patients are suitable for treatment in settings with reduced medical assistance--limited care.

TYPICAL HOSPITAL HEMODIALYSIS FACILITY



Source: Medical Illustration Service, VA Hospital, Bronx, New York

VITAL MEDICAL SIGNS OF PATIENT RECEIVING
HEMODIALYSIS TREATMENT ARE CHECKED BY NURSE



Source: Medical Illustration Service, VA Hospital, Bronx, New York

Eight of the nine VA hospitals included in our review operated hemodialysis centers. At our request, physicians at these centers identified those patients being dialyzed in the hospital who could be treated in lower care hemodialysis settings. The following table summarizes the physicians' opinions and shows that 158 of 223 patients, or about 70 percent, were suitable for treatment in lower case settings.

<u>Total patients</u>	<u>Trainable for home or satellite dialysis</u>	<u>Suitable for limited care dialysis</u>	<u>Must remain in hospital center dialysis</u>
Number 223	91	67	65
Percent 100	41	30	29

VA physicians said, of the 91 patients classified as trainable for home or satellite dialysis, 21 were receiving self-dialysis training at the time of our review. None of the 67 patients classified as suitable for limited care dialysis were receiving treatments in a limited care setting since VA has not provided this type setting. They remained in the highly staffed hospital centers.

The importance of planning for the proper level of care for veterans requiring hemodialysis treatment can be demonstrated by the lack of adequate hemodialysis treatment capability in the New York area VA hospitals. The following table shows the number of patients receiving and waiting to receive hemodialysis treatment in the four treatment settings as of June 30, 1972.

<u>Hospital</u>	<u>Patients requiring hospital dialysis</u>		<u>Patients receiving satellite, limited care, or home care dialysis</u>	<u>Patients requiring self dialysis</u>	
	<u>Being treated</u>	<u>Waiting for treatment</u>		<u>Being trained</u>	<u>Waiting for training</u>
Bronx	25	16	8	4	6
East Orange	24	22	-	-	10
Manhattan	<u>16</u>	<u>10</u>	<u>33</u>	<u>3</u>	<u>7</u>
Total	<u>65</u>	<u>48</u>	<u>41</u>	<u>7</u>	<u>23</u>

Physicians said some patients awaiting hospital dialysis were being maintained on peritoneal dialysis, which is a technique used for sustaining patients awaiting entry into a hemodialysis program. Peritoneal dialysis is not considered as the method of choice for chronic, long-term treatment since it is less efficient and less satisfactory. It was given to patients at the Bronx hospital for an average of 3 months until beds became available in the hemodialysis facility.

According to officials at the Manhattan VA Hospital, if a hemodialysis candidate is on the waiting list for as long as 2 weeks and a bed in the dialysis center does not become available, VA notifies the patient that he cannot be accepted into the hospital's program. At this time veterans with service-connected disabilities are placed in private hospitals in the area and VA pays for their treatments on a contractual basis. Veterans without service-connected disabilities are referred to the hospital's social work service which investigates the availability of community resources. The costs for treatment for these patients is borne either by the patient or the community.

Some progress is being made to meet the needs of VA patients in the New York area. However, part of the problem for a number of patients awaiting hemodialysis treatment in these VA hospitals and, in some cases, patients seeking treatment at community facilities was that patients with a stabilized condition who could be receiving treatment in satellite or limited care facilities were occupying beds in hospital dialysis centers.

According to VA officials, VA is planning to provide additional hemodialysis capability in its hospitals in the New York area. VA officials advised us that a satellite dialysis facility has been activated at the Brooklyn VA Hospital.

CENTRAL OFFICE STAFFING GUIDELINES
NEED REVISION

VA Central Office officials advised us that the current VA hemodialysis staffing guidelines were developed in 1967. New dialysis equipment has come into use since 1967 which is smaller and has reduced treatment time from 13 hours to 6 to 8 hours. VA physicians said these equipment changes have made personnel reductions feasible.

VA hemodialysis centers differ in their interpretations of the guidelines. For example, VA guidelines are based on a 5-day, 1-shift a day operation, but some hospitals interpreted the guidelines to be for a 2-shift operation.

VA guidelines suggest a 2.5 staff per bed ratio. Since patients generally receive two to three dialysis treatments a week and one bed can provide five dialysis treatments weekly on a 5-day, 1-shift a day operation, the guidelines can be restated as 1.25 staff for each patient treated. The hospital physicians provided us with information on the number of patients being treated in their units and their staffing levels. The following table summarizes information regarding staff to patient ratios. The table shows that staffing levels at all but one location were lower than guidelines levels.

Treatment setting	<u>VA Hospitals</u>							
	<u>Bronx</u>	<u>Manhattan</u>	<u>East Orange</u>	<u>Chicago Research</u>	<u>Hines</u>	<u>Wood</u>	<u>Long Beach</u>	<u>San Diego</u>
Staff	12	8	17	21	35	10	18	10
Patients	24	16	24	20	41	15	16	^a 6
Staff to patient ratio	.5:1	.5:1	.7:1	1.1:1	.9:1	.7:1	1.1:1	1.7:1

^aUnit opened in May 1972.

CONCLUSIONS

Many veterans dialyzed in highly staffed hospital centers could receive treatment in lower care settings with reduced medical assistance. These patients have stable medical conditions and could either be receiving dialysis at home or in satellite dialysis facilities if adequate facilities were available. VA is expanding its capability and capacity to serve these patients.

Other stable patients who are untrainable could receive treatment in limited care facilities. However, VA has not incorporated this concept into its hemodialysis program, and these patients remain in highly staffed hospital centers. In addition to the added cost, hospital beds fill because of low turnover, and other patients in need of this higher level of care may not be able to receive it.

VA staffing guidelines for hemodialysis centers are outdated and VA hospitals are not following them. The staffing patterns at the hospitals indicate that VA guidelines need to be revised.

RECOMMENDATIONS

We recommend that the Administrator of Veterans Affairs:

- Determine the number of patients which could be transferred to limited care dialysis and if appropriate make limited care dialysis an integral part of the VA hemodialysis program.
- Revise staffing guidelines to take advantage of economies made possible by changes in equipment and methods of treating patients.

AGENCY COMMENTS AND GAO EVALUATION

VA advised us that several of its hemodialysis centers have activated limited care programs operated during off-hours and that it plans to have limited care capability at all of its hemodialysis centers in fiscal year 1975. They pointed out, however, that limited care facilities would not be appropriate for patients who are untrainable in self-dialysis.

We believe that VA should reconsider including untrainable patients in their concept of limited care. VA medical advisory committees in New York and Chicago stated that about 70 to 80 percent of dialysis patients were able to receive treatment in settings less costly than the hospital centers. About half of these patients have stable medical conditions but are untrainable for self-dialysis. The reports further state that these patients are suitable for treatment in settings with reduced medical assistance--limited care. VA physicians at eight hemodialysis centers we reviewed believed that 30 percent of their patients being dialyzed in hospitals were untrainable patients and were suitable for limited care dialysis.

VA stated that it would examine its staffing guidelines for hemodialysis units.



VETERANS ADMINISTRATION
OFFICE OF THE ADMINISTRATOR OF VETERANS AFFAIRS
WASHINGTON, D.C. 20420

JANUARY 31 1974

Mr. Frank M. Mikus
Assistant Director
Manpower and Welfare Division
U. S. General Accounting Office
Room 137, Lafayette Building
Washington, D. C. 20420

Dear Mr. Mikus:

We have carefully considered your draft report on "Better Planning and Management Needed to Improve Utilization of Specialized Medical Services." We appreciate the opportunity to comment on this draft report. We also appreciate the additional insight your study of these programs has provided.

We concur generally with your recommendations as stated. I recognize that there are or have been some deficiencies in the acquisition, deployment, and control of certain specialized medical programs as indicated in your draft report. On the positive side, these programs have been highly beneficial to patient care and successful in bringing new modalities of diagnostic and treatment value to bear with minimal dislocation or disruption of ongoing operations. Many of the shortcomings outlined in your draft report were the direct result of the relatively rapid progression of special medical programs and the unavailability of information on community needs and resources. We are now in a much better position to accomplish the refinements in the management of these programs that you recommend. Much has been accomplished since you conducted the review on which this report was based. I agree with your recommendation to establish, review, and maintain adequate criteria and guidelines for these programs and of periodic evaluation of program effectiveness. These programs involve multiple and complex considerations where criteria and guideline enforcement must permit latitude for informed judgment.

APPENDIX I

Mr. Frank M. Mikus
Assistant Director
Manpower and Welfare Division
U. S. General Accounting Office

I also agree with your recommendations regarding super-voltage therapy services and we have already taken action to close some units and consolidate others.

Your recommendation regarding our kidney transplant program is acceptable; however, I am not in full agreement with the related findings and conclusions included in your draft report.

[See GAO note.]

Regarding the supply of donor kidneys, I would like to point out that every donor kidney that becomes available in the entire country is equally available to any potential recipient, VA or non-VA, regardless of his geographic location or the size of the unit in which he is located as long as his unit has joined the registry within which the kidney becomes available. A kidney harvested in California was recently transplanted to a recipient in Albany, New York.

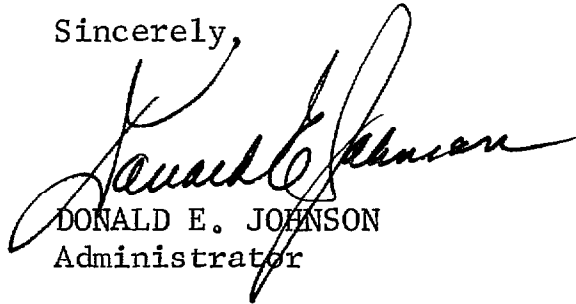
The portion of your draft report dealing with hemodialysis refers to limited care which term may be confusing. Our concept of limited care, which is shared by the National Kidney Foundation, would not be appropriate for patients who are untrainable in self-dialysis. Within this context, several of our VA hemodialysis centers have already activated

GAO note: Deleted comments relate to matters which are not discussed in this report.

Mr. Frank M. Mikus
Assistant Director
Manpower and Welfare Division
U. S. General Accounting Office

limited care programs operated during off-hours. We plan to have limited care capability at all of our hemodialysis centers in Fiscal Year 1975. You also point out that staffing guidelines for hemodialysis centers are outdated. While this has had no significant impact on the program, we will give this matter attention.

Sincerely,



DONALD E. JOHNSON
Administrator

VA FACILITIES REVIEWED

<u>Organization</u>	<u>Location</u>	<u>Description</u>
VA Central Office	Washington, D.C.	
Long Beach Hospital	Long Beach, Calif.	1,684-bed general hospital
San Diego Hospital	La Jolla, Calif.	811-bed general hospital, operating 586 beds at January 1973
Research Hospital	Chicago, Ill.	531-bed general hospital
Hines Hospital	Hines, Ill.	1,539-bed general hospital
Wood Hospital	Wood, Wisc.	935-bed general hospital
Bronx Hospital	Bronx, N.Y.	1,018-bed general hospital
Brooklyn Hospital	Brooklyn, N.Y.	1,000-bed general hospital
New York (Manhattan) Hospital	New York City, N.Y.	882-bed general hospital
East Orange Hospital	East Orange, N.J.	992-bed general hospital

VA SPECIALIZED MEDICAL SERVICES

	Reported costs		
	<u>1971</u>	<u>1972</u>	<u>1973</u>
	<u>(millions)</u>		
Alcohol treatment units	\$ 12.9	\$ 19.2	\$ 29.3
Blind clinics	.5	.8	.9
Blind rehabilitation centers	2.0	1.9	2.3
Cardiac catheterization labs	4.3	4.8	5.9
Day hospitals	1.9	2.8	3.6
Day treatment centers	3.8	4.1	4.6
Drug dependence treatment units	1.1	22.3	29.0
Electron microscopy units	.7	.9	1.5
Epilepsy centers	.1	.4	.5
Hemodialysis units	10.3	13.4	16.4
Home dialysis	3.7	7.4	10.5
Contract hemodialysis	1.4	2.6	3.6
Hospital-based home care	-	.2	.5
Intensive care unit/surgical	21.3	26.7	35.7
Intensive care unit/medical	15.2	19.6	29.7
Intensive care unit/coronary	9.9	13.6	17.9
Mental hygiene clinics	14.9	16.7	18.7
Nuclear medicine	7.9	10.0	12.5
Open heart surgery centers	4.0	4.8	4.4
Prosthetic treatment centers	2.8	4.9	6.8
Pulmonary function labs	3.9	4.8	5.6
Respiratory care centers	16.6	22.9	31.1
Reference laboratories (special)	.4	.5	.6
Kidney transplant centers	1.0	2.3	3.4
Speech pathology units	2.5	3.1	4.6
Spinal cord injury centers	20.2	29.7	34.6
Stereotactic brain surgery centers	.5	.2	.2
Supervoltage therapy units	1.6	2.1	2.2
	<u>\$165.4</u>	<u>\$242.7</u>	<u>\$316.6</u>

APPENDIX IV

PRINCIPAL OFFICIALS
 RESPONSIBLE FOR ADMINISTERING
 ACTIVITIES DISCUSSED IN THIS REPORT

Tenure of office
From To

VETERANS ADMINISTRATION

ADMINISTRATOR OF VETERAN AFFAIRS:

D. E. Johnson	June 1969	Present
W. J. Driver	Jan. 1965	May 1969

DEPUTY ADMINISTRATOR:

R. J. Roudebush	Jan. 1974	Present
F. B. Rhodes	May 1969	Jan. 1974
A. W. Stratton	Nov. 1967	May 1969
Vacant	Sept. 1967	Nov. 1967
C. F. Brickfield	Feb. 1965	Sept. 1967

CHIEF MEDICAL DIRECTOR:

M. J. Musser, M.D.	Jan. 1970	Present
H. M. Engle, M.D.	Jan. 1966	Jan. 1970

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