C96511
2.39.05

REPORT TO THE CONGRESS

72-0286

34
12

Low Use Of Open-Heart-Surgery Centers At Veterans Administration Hospitals

B-133044

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

096511
Z0197

BEST DOCUMENT AVAILABLE

JUNE 29, 1972

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 on the low use of open-heart-surgery centers at Veterans Administration hospitals.

Our review was made 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).

Copies of this report are being sent to the Director, Office of Management and Budget, and to the Administrator of Veterans Affairs.

Elmer B. Staats

Comptroller General
of the United States

BEST DOCUMENT AVAILABLE

Contents

ABBREVIATIONS

GAO	General Accounting Office
VA	Veterans Administration
HEW	Department of Health, Education, and Welfare

BEST DOCUMENT AVAILABLE

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

LOW USE OF OPEN-HEART-SURGERY CENTERS AT VETERANS ADMINISTRATION HOSPITALS
B-133044

D I G E S T

WHY THE REVIEW WAS MADE

Since 1965 the Veterans Administration (VA) has established 23 open-heart-surgery centers in its hospitals.

Medical experts differ as to the number of open-heart operations that surgical teams must perform to retain the technical skill needed for this type of surgery. VA has adopted a minimum criterion of 52 operations a year for its open-heart-surgery centers. (See pp. 5 to 7.)

The General Accounting Office (GAO) reviewed the use of VA open-heart-surgery centers to see if surgical teams were performing the minimum number of operations.

FINDINGS AND CONCLUSIONS

During fiscal year 1971, only seven of the 23 centers performed at least the minimum number of open-heart operations considered necessary under the VA criterion. (See p. 8.)

During fiscal years 1965 through 1971, only five centers averaged the annual number of operations considered necessary. Eight centers never performed more than 30 open-heart operations in any one year. (See p. 8.)

Several reasons were given for the low use of the centers. One VA surgeon estimated that as many as 40 percent of all open-heart operations throughout the country were for congenital heart defects. Individuals having such heart defects are usually not admitted into military service. (See p. 9.)

Also, VA allows some of its hospitals which are not open-heart-surgery centers to perform open-heart surgery or to transfer their surgery patients to medical school hospitals with which they are affiliated, rather than to the nearest VA open-heart-surgery centers. (See p. 9.)

RECOMMENDATIONS OR SUGGESTIONS

The Administrator of Veterans Affairs should evaluate the program to redetermine the number and locations of open-heart-surgery centers. This evaluation should consider the needs of VA patients and the minimum workload necessary to permit surgical teams to retain the required technical skill. (See p. 10.)

Tear Sheet BEST DOCUMENT AVAILABLE

JUNE 29, 1972

AGENCY ACTIONS AND UNRESOLVED ISSUES

VA agreed in principle with GAO and is developing plans to carry out the recommendation. An advisory group has been established to review existing centers. (See pp. 10 and 11.)

GAO asked that VA keep it informed of the progress of the evaluation.

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report informs the Congress of efforts being made to improve the quality of medical care of veterans.

CHAPTER 1

INTRODUCTION

Veterans who have medical disabilities incurred or aggravated in the line of duty are entitled by law (38 U.S.C. 612) to all medical services which are reasonably necessary to treat such disabilities. Veterans can also receive medical care to treat conditions which are not military connected if they are unable to pay for such care.

To help provide medical care to veterans, the Veterans Administration (VA) operates 167 hospitals. In addition to normal hospital services, specialized medical services--such as hemodialysis, organ replacement, and open-heart surgery--are available within the VA hospital system. VA's Department of Medicine and Surgery is responsible for administering these hospitals and specialized medical services.

To ensure that veterans receive quality medical care, VA has initiated a program of hospital affiliation with recognized medical schools. The affiliation agreements between VA and the medical schools provide for such activities as

--medical residency and internship training,

--appointing VA physicians to medical school faculty positions,

--consulting and attending services by medical school doctors,

--sharing specialized medical resources, and

--treating veterans by the medical schools' professional staff at VA hospitals on a fee basis.

As of June 30, 1971, 96 VA hospitals were affiliated in some way with 82 medical schools.

Recognizing that the field of open-heart surgery was becoming prominent, VA surgical consultants recommended

BEST DOCUMENT AVAILABLE

in 1964 that VA establish open-heart-surgery centers at certain VA hospitals. These consultants recommended also that a hospital approved as a center be affiliated with a medical school.

VA agreed with these recommendations and in February 1965 established 13 open-heart-surgery centers. VA funded nine more centers in fiscal year 1968 and two more centers in fiscal year 1970, which brought the total to 24. Subsequent to fiscal year 1968, one of the centers was deactivated, which resulted in a total of 23 active open-heart-surgery centers on June 30, 1971.

Over the past several years, VA medical officials and cardiovascular surgeons in the private sector have stressed the need for surgical teams to perform a minimum number of open-heart-surgery operations to retain their proficiency.

Our review of the use of VA open-heart-surgery centers was made at VA headquarters in Washington, D.C., and at VA hospitals at Allen Part, Michigan; Ann Arbor, Michigan; Palo Alto, California; Portland, Oregon; San Francisco, California; Seattle, Washington; and Wood, Wisconsin.

CHAPTER 2

LOW USE OF OPEN-HEART-SURGERY CENTERS

Our review showed that most open-heart-surgery centers at VA hospitals were not performing the minimum number of operations considered essential by VA medical officials to permit surgical teams to retain the high degree of technical skill required for this type of surgery. The key facts in the matter are discussed below.

CASELOAD CONSIDERATIONS FOR OPEN-HEART-SURGERY TEAMS

When recommending the establishment of open-heart-surgery centers (see p. 7), VA's surgical consultants recommended also that approved centers be geared to caseloads of not less than one, nor more than two, open-heart operations a week.

The Department of Medicine and Surgery agreed with this recommendation and, in a circular dated January 29, 1965, stated that the anticipated caseload must not be less than one open-heart operation a week to establish an open-heart-surgery center. The circular assigned to local hospital management the responsibility for ensuring that the caseload did not exceed the capability of the center and required that a hospital not designated as an open-heart-surgery center transfer open-heart-surgery cases to the nearest designated center.

The following statement was made by VA when plans were made in 1964 to establish open-heart-surgery centers.

> "Taking a critical look at the present status of the problem, it is readily apparent that the VA can no longer continue a policy of random performance of an occasional case of open heart surgery at multiple hospitals. *** Furthermore, the performance of an occasional operation does not permit the surgical team to attain and retain the high degree of technical skill that is required for this type of surgery." (Underscoring supplied.)

BEST DOCUMENT AVAILABLE

A report by the President's Commission on Heart Disease, Cancer, and Stroke, issued in February 1965,[1] stated that the ideal caseload for an open-heart-surgery team was probably between 100 and 200 open- and closed-heart operations a year. The report stated also that, if cardiac surgery was done only once every 2 weeks or once a month, the competence and experience of a well-trained cardiac surgery team could not be maintained.

A surgery study group[2] supported by a Department of Health, Education, and Welfare (HEW) contract, in a report issued in September 1971, further recognized the importance of surgery teams' having a sufficient workload.

> "*** One factor can be clearly identified: the workload must be sufficient to allow physicians and surgeons opportunity to develop and maintain their clinical skills and research interests. Of equal importance are the development and maintenance of the professional skills of the nursing and technical staff and the preservation of their motivation and morale. We believe the smallest practical unit to qualify as a cardiac center should perform four to six cardiac operations with extracorporeal circulation weekly, an increase over the previous editorial judgment [note 3] in this country that two open heart cases per week constitute the irreducible minimum for maintaining an effective open-heart program. ***" (Underscoring supplied.)

---

[1] The President's Commission on Heart Disease, Cancer, and Stroke, Report to the President: A National Program to Conquer Heart Disease, Cancer, and Stroke, Volume II, U.S. Government Printing Office (Washington: February 1965).

[2] Intersociety Commission for Heart Disease Resources, Surgery Study Group.

[3] B. Eiseman and F. C. Spencer, The Occasional Open-Heart Surgeon, Circulation, Vol. 31, February 1965, p. 161.

Also in September 1971, a VA committee on cardiac surgery, which endorsed the findings of the HEW-supported study, stated:

> "*** The sense of the committee was that a minimum of at least one open heart surgical procedure per week must be done by each center, in order for it to qualify as a center. Thus the emphasis now is on improved performance, based upon experience with adequate number of cardiac surgical cases, on the part of surgical teams and ancillary services. While it is recognized that surgeons operating in VA hospitals may have experience with many other cardiac surgical cases outside of VA hospitals, ancillary personnel, including O.R. [operation room] nurses and technicians, pump technicians, surgical intensive care unit nurses, and other full-time VA employees need exposure to a minimum of at least one case a week, in order to meet the minimum criteria for cardiac centers as established by this committee." (Underscoring supplied.)

A VA official told us, when commenting on a draft of this report, that the expertise and backup support necessary for open-heart operations must also be available for closed-heart operations. (See app. I.) He told us also that cardiovascular surgeons performed other types of surgical procedures. However, as stated above, the various surgical groups within both VA and the private sector have maintained that there is a need for surgery teams--including physicians, surgeons, and ancillary service personnel--to perform a minimum number of open-heart operations to retain their proficiency.

BEST DOCUMENT AVAILABLE

OPEN-HEART OPERATIONS PERFORMED AT VA CENTERS

During fiscal year 1971, only seven of the 23 centers performed at least the minimum number of open-heart operations considered necessary by VA medical officials.

Moreover, from inception of the program in fiscal year 1965 through fiscal year 1971, only five centers averaged the annual number of operations considered necessary. Eight centers never performed more than 30 open-heart operations in any one year of operation, which is far below the 52 considered necessary.

The following schedule shows the number of open-heart operations performed by the centers during fiscal years 1965 through 1971.

Number of Open-Heart Operations Reported in VA Open-Heart-Surgery Centers

Location of VA hospital	Fiscal year 1965 (note a)	1966	1967	1968	1969	1970	1971	Annual average (note b)
Atlanta, Georgia	-	-	-	-	-	-	(c)	0
Bronx, New York	16	24	21	10	16	19	29	20
Buffalo, New York	8	12	9	14	13	12	10	12
Cincinnati, Ohio	-	-	-	5[d]	-	-	-	-
Cleveland, Ohio	-	-	-	12	31	35	19	28
Dallas, Texas	-	-	-	19	29	31	44	35
Denver, Colorado	-	-	-	34	27	43	49	40
Durham, North Carolina	11	20	35	16	16	20	(e)	18
Hines, Illinois	50	45	56	75	88	71	38	62
Houston, Texas	9	19	36	45	29	57	118	51
Indianapolis, Indiana	-	-	-	20	22	11	6	13
Kansas City, Missouri	-	-	-	15	7	8	18	11
Los Angeles, California	52	59	66	45	41	54	54	53
Memphis, Tennessee	-	-	-	-	-	-	9	9
Miami, Florida	-	-	-	3	17	7	30	18
Minneapolis, Minnesota	45	47	37	19	25	25	48	34
Oteen, North Carolina	38	53	52	43	40	45	85	53
Palo Alto, California	19	32	36	21	46	98	129	60
Philadelphia, Pennsylvania	26	22	20	17	20	13	(e)	15
Pittsburgh, Pennsylvania	10	13	16	(e)	24	11	23	15
Portland, Oregon	-	-	-	(e)	20	21	58	33
San Francisco, California	12	37	52	49	26	41	69	46
West Roxbury, Massachusetts	30	45	44	44	36	44	42	43
Wood, Wisconsin	-	-	-	19	33	48	82	54
Total	326	428	480	525	606	714	960	
Average for all centers	25	33	37	24	29	34	42	

[a]The 13 open-heart-surgery centers were established on February 19, 1965.

[b]Averages were computed on the basis of operations performed only when centers were open entire years by eliminating the years in which the centers were established.

[c]Station was initially funded as an open-heart-surgery center in fiscal year 1970; however, no operations were performed in 1970 or 1971.

[d]Station has been deactivated.

[e]Centers were funded but did not perform open-heart operations.

BEST DOCUMENT AVAILABLE

FACTORS AFFECTING LOW CASELOADS AT VA CENTERS

VA cardiovascular surgeons advised us of the following reasons for the low number of open-heart-surgery patients at the VA centers. One surgeon estimated, on the basis of a study, that as many as 40 percent of all open-heart-surgery operations, nationwide, were for congenital heart defects. Because individuals having such defects are usually not admitted into military service, they do not become veterans.

Another reason given for the low number of open-heart-surgery patients at VA centers was that VA allowed hospitals not designated as open-heart-surgery centers to (1) perform open-heart surgery or (2) transfer patients needing such surgery to the hospitals of the medical schools with which they were affiliated, rather than to the nearest VA open-heart-surgery centers. VA records indicated that in fiscal year 1971 a total of 367 open-heart operations were performed by open-heart-surgery teams at 15 VA hospitals not designated as open-heart-surgery centers or at non-VA hospitals. The following table shows the number of such operations performed at these hospitals during fiscal years 1969 through 1971.

Open-Heart-Surgery Caseload Reported for VA Hospitals Not Designated as Open-Heart-Surgery Centers

VA hospital	Fiscal year 1969	1970	1971
Albany, New York	2	4	10
Albuquerque, New Mexico	-	6	18
Ann Arbor, Michigan	9	13	16
Atlanta, Georgia	60[a]	-	-
Birmingham, Alabama	33[a]	36[b]	50[a]
Charleston, West Virginia	4	10	24
Chicago, Illinois	10	-	-
Gainesville, Florida	15	24	43
Jackson, Mississippi	-	-	2
Lexington, Kentucky	12	6	4
Little Rock, Arkansas	-	5	17
Long Beach, California	-	13	35
Memphis, Tennessee	7	4[b]	-
Nashville, Tennessee	24	16	29
New Orleans, Louisiana	-	1	-
New York, N.Y.	46	53	77
Oklahoma City, Oklahoma	66[c]	19	26
Omaha, Nebraska	-	3	5
Richmond, Virginia	-	9	-
Washington, D.C.	-	5	11
Total	288	227	367

[a]These cases performed by open-heart-surgery teams consisting of VA physicians and medical school physicians in non-VA facilities.

[b]These stations became open-heart-surgery centers during the fiscal year.

[c]A total of 58 of these cases were performed by a combined VA-medical school open-heart-surgery team in non-VA facilities, and the remaining cases were performed by a VA team in VA facilities.

BEST DOCUMENT AVAILABLE

VA's general policy is to encourage the transfer of patients requiring open-heart surgery to the nearest VA open-heart-surgery center. (See p. 5.) However, the Chief Medical Director stated that it was not always possible, desirable, or appropriate to transfer patients to a distant center for surgery. He stated also that in every case the best interest of the patient was the prime consideration.

CONCLUSION

VA surgeons and cardiovascular surgeons in the private sector have stressed the importance of open-heart-surgery teams' performing a sufficient number of operations to retain the high degree of technical skill required for this type of surgery. The minimum number of open-heart operations advocated by these surgeons has ranged from one to six a week. VA medical officials have adopted a minimum caseload of at least one operation a week for VA open-heart-surgery centers.

We found that many of the open-heart-surgery centers established by VA were not meeting VA's minimum caseload. Therefore, we believe that VA should evaluate its open-heart-surgery program.

RECOMMENDATION

We recommend that the Administrator of Veterans Affairs evaluate VA's open-heart-surgery program in the light of experience to date to redetermine the number and locations of open-heart-surgery centers. This evaluation should consider the needs of VA patients and the minimum workload necessary to permit surgical teams to retain the high degree of technical skill required for this type of surgery.

AGENCY COMMENTS

VA stated that it concurred in principle with our recommendation and that plans were being developed to carry out an evaluation of the open-heart-surgery program as rapidly as resources permitted. VA stated also that it had already established a Cardiac Surgery Advisory Group which

BEST DOCUMENT AVAILABLE

is responsible for reviewing existing and planned open-heart-surgery centers.

We are asking VA to keep us informed of its progress in evaluating the open-heart-surgery program.

BEST DOCUMENT AVAILABLE

VETERANS ADMINISTRATION
Office of the Administrator of Veterans Affairs
Washington, D. C. 20420

FEBRUARY 28 1972

Mr. Frank N. Mikus
Assistant Director
Civil Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Mikus:

Thank you for the opportunity to review and comment on your proposed draft report entitled, "Problems Associated with Low Utilization of Open Heart Surgery Units at Veterans Administration Hospitals."

We concur with the principle expressed in your recommendation of peer evaluation of the open heart surgery program. Plans are being developed to achieve this as rapidly as resources permit. We had already implemented the principle when we established the Cardiac Surgery Advisory Group, who are charged with the responsibility of reviewing existing open heart surgery centers and those planned for future designation. Their decision will be based on a review of procedures, site visits and needs of the veteran population.

Open heart surgery is no longer considered as independent of cardiac surgery because the same expertise and back-up support necessary for open heart procedures must also be available for closed procedures. To conclude that the open heart surgical centers are the only places requiring an oxygenator pump or by-pass system would be too restrictive to cardiac surgery.

BEST DOCUMENT AVAILABLE

Mr. Frank M. Mikus
Assistant Director
Civil Division
USGAO

While the figures cited in the draft report covering the period 1965-1970 are accurate, they represent the experience of a program in the earliest stages of development, a program that was materially advanced by the professional contributions of VA. At our recent meeting, we supplied your staff with the most recent statistics (FY 1971) which indicate a sharp increase in the numbers of open heart procedures. For FY 1971, a total of 1456 by-pass procedures were reported by 39 stations, ranging from a low of three to a high of 129 or an average of 37 per station. We anticipate that the number of open heart procedures will continue to increase before reaching a plateau. Similarly, we expect the needs of the veteran population to change and, therefore, we must be flexible enough to meet those needs. We must be ready to relocate centers as geographic requirements change or establish new centers to meet the needs of the veteran population.

Sincerely,

FRED B. RHODES
Deputy Administrator

BEST DOCUMENT AVAILABLE

PRINCIPAL OFFICIALS OF THE VETERANS ADMINISTRATION RESPONSIBLE FOR ADMINISTRATION OF ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
ADMINISTRATOR OF VETERANS AFFAIRS:		
D. E. Johnson	June 1969	Present
W. J. Driver	Jan. 1965	May 1969
DEPUTY ADMINISTRATOR:		
F. B. Rhodes	May 1969	Present
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
J. H. McNinch, M.D.	June 1963	Jan. 1966
ASSISTANT CHIEF MEDICAL DIRECTOR FOR RESEARCH AND EDUCATION IN MEDICINE:		
J. A. Pittman, M.D.	July 1971	Present
L. V. Foye, M.D. (acting)	Feb. 1971	July 1971
L. E. Lee, M.D.	Feb. 1970	Feb. 1971
T. C. Charmers, M.D.	Aug. 1968	Feb. 1970
L. M. Bernstein, M.D. (acting)	June 1967	Aug. 1968
B. B. Wells, M.D.	Jan. 1967	June 1967
DIRECTOR, SURGICAL SERVICE:		
F. C. Jackson, M.D.	Aug. 1970	Present
C. F. Hill, M.D. (acting)	Feb. 1970	Aug. 1970
L. E. Lee, M.D.	Jan. 1967	Feb. 1970

BEST DOCUMENT AVAILABLE

Copies of this report are available from the U. S. General Accounting Office, Room 6417, 441 G Street, N W., Washington, D.C., 20548.

Copies are provided without charge to Members of Congress, congressional committee staff members, Government officials, members of the press, college libraries, faculty members and students. The price to the general public is $1.00 a copy. Orders should be accompanied by cash or check.