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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

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MANPOWER AND WELFARE DIVISION

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Sep 14 1973

The Honorable Donald E. Johnson
Administrator
Veterans Administration

Dear Mr. Johnson:

We reviewed the Veterans Administration (VA) program for installing and using closed circuit television (CCTV) systems in VA hospitals to assist in patient care. CCTV systems serve as both an educational and a clinical tool; their uses vary among hospitals. We made our review at selected VA hospitals in Minnesota, Nebraska, New York, Oklahoma, Texas, and Wisconsin.

More effective central office management and control over CCTV activities is needed. Specifically, a system should be established for disseminating to all VA hospitals with CCTV capabilities (1) information on successful and unsuccessful uses of CCTV and (2) lists of available video tapes. Also, criteria should be established which hospitals could use to evaluate their CCTV systems.

BACKGROUND

Funds to operate the CCTV systems come from the Exchange of Medical Information Program and the Postgraduate and In-service Training Activities Program.

The Exchange of Medical Information Program, established by Public Law 89-785, dated November 7, 1966, provides for a medical information program in VA and for the exchange of medical information between VA and medical schools, hospitals, research centers, and individual members of the medical profession. To accomplish this objective, the act requires that:

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"* * * the Administrator shall utilize recent development in electronic equipment to provide a close educational, scientific, and professional link between Veterans Administration hospitals and major medical centers."

"* * * the electronic link to medical centers shall be made available for use by surrounding medical community."

The Postgraduate and Inservice Training Activities Program, established by Public Law 85-507, dated July 7, 1958, pays for educational tuition, special lecture fees, travel costs in connection with educational assignments, and training equipment and services.

As of June 30, 1972, VA was operating 116 CCTV systems in its hospitals. It plans to establish a regional CCTV network in each of its 38 medical regions by connecting the systems of all hospitals in each region. Because VA does not specifically identify funds used for CCTV, we could not develop the total annual cost for operating the existing CCTV systems. However, VA has estimated that it will cost about $16 million to install the equipment needed to establish its regional networks and $18 million annually to lease lines to electronically connect the hospitals.

Many CCTV uses are in the experimental stage, and experts cannot agree which uses are effective.

A 1967 VA task force, established to review VA involvement with CCTV and to make recommendations to the chief medical director, reported that CCTV was a method for providing continuing medical education on a communitywide basis because it could reach a large number of people. It also reported that (1) the major justification for medical television was based on educational requirements, (2) the major impetus for CCTV came from medical schools and teaching institutions, and (3) the more advanced and sophisticated CCTV systems were found in hospitals with significant ties to the community, medical schools, and various non-VA groups.

CCTV can also be used for

--monitoring patient-care areas to facilitate nursing and psychiatric observation,

--directing audiovisual communication between the surgeon and the pathologist during surgical operations and between the surgeon and the radiologist,

--intensifying images in connection with electron microscopy applications,

--video taping psychiatric counseling sessions, such as patient-physician sessions, group therapy, and patient self-confrontation programs, and

--surveying non-patient-care areas, such as parking lots, exits, supply warehouses, narcotic storage, canteens, admission areas, and waiting rooms.

ORGANIZATIONS RESPONSIBLE FOR CCTV ACTIVITIES

No single organization has responsibility for the overall management of CCTV activities. Several VA central office services share this responsibility. The decisionmaking authority regarding CCTV use for medical activities lies primarily with the education service--and to a lesser extent with the supply service--of the department of medicine and surgery. The technical expertise on CCTV systems is located in the telecommunications service which is part of the department of data management.

The education service administers the Postgraduate and Inservice Training Activities Program and the Exchange of Medical Information Program. It reviews justifications for CCTV submitted by hospital management and insures that appropriate followup action is taken to review the results of CCTV pilot projects.

The telecommunications service does not determine or give advice concerning a hospital's need for CCTV. Instead, once hospital officials have decided to acquire a CCTV

system, the telecommunications service determines suitable equipment and technical configurations to meet hospital requirements. It (1) performs a preliminary requirements survey, (2) evaluates systems, (3) develops technical descriptions for procurement actions, and (4) performs acceptance testing after installation. Because of the unique needs and characteristics of each hospital, no standard VA-wide CCTV system has been developed; each CCTV system installation has had to be tailored to meet individual hospital requirements.

The supply service receives, and is responsible for approving, all requests for CCTV equipment procurement. It also must coordinate the request for CCTV with the appropriate professional service, such as the nursing service or the surgical service, because central office approval procedures--for CCTV systems intended primarily for specific diagnostic or therapeutic purposes--require approval by the appropriate professional service division officials.

The VA task force report to the chief medical director in November 1967 stated:

> "Because of the several elements in Central Office concerned with CCTV, there should be a representative committee during the period of early development to make recommendations to the Chief Medical Director concerning major issues and to act on equipment and utilization request."

Although such a committee was formed, there was no evidence that it has ever met to consider the matters for which it was established.

NEED FOR BETTER EXCHANGE OF INFORMATION ON CCTV USES

VA has not established a system for making information on CCTV use available to the various hospitals having CCTV systems. Hospital officials said that an effective exchange of information on the successes and failures experienced by other hospitals with various CCTV uses would be beneficial.

Although there were differences of opinion among CCTV users regarding the benefits of various uses, all hospitals we visited had examples of beneficial uses. For example, a 1971 progress report on the CCTV network including the three Nebraska VA hospitals (Omaha, Lincoln, and Grand Island) stated that psychiatric services have been expanded in each of the hospitals as a result of the electronic connection with the Nebraska Psychiatric Institute. Uses of this CCTV system included

--patient group therapy via CCTV from the Nebraska Psychiatric Institute to the Omaha and Lincoln VA Hospitals on a weekly basis and

--patients being treated on an outpatient basis at both the Lincoln and the Grand Island VA Hospitals via television.

But, useful data on this successful use of CCTV was not shared because of the lack of a system to exchange such information. Buffalo VA Hospital officials informed us that the lack of information on this system may have hampered the development of their own program because, although they had learned that the Nebraska hospitals' system was similar to the one they were planning locally, they could obtain no additional information about the system from the VA central office.

A Temple, Texas, VA Hospital official with primary responsibility for CCTV stated that he knew of no guidelines from the VA central office regarding effective CCTV uses. He stated that he had visited two other Federal facilities, one a VA hospital, seeking proven uses of a CCTV system.

UTILIZATION OF CCTV SYSTEMS

VA has not established criteria for independently measuring the effective utilization of CCTV systems. Consequently, hospital personnel who use the system make assessments which may only reflect their personal opinions as to what constitutes effective utilization.

Hospital officials expressed various opinions on what constitutes effective utilization of a CCTV system. Some stated that CCTV operations in VA hospitals need not be limited to a 40-hour a week operation. For example, Omaha VA Hospital officials stated that CCTV equipment--including transmission facilities--was available 24 hours a day, 7 days a week.

As previously stated, the CCTV system used by the Omaha hospital is a sophisticated network and is interconnected with systems at the Lincoln and Grand Island VA Hospitals and the Nebraska Psychiatric Institute. As shown below, analysis of the utilization of the system by the Omaha hospital showed that, on an average, the system was being used about 61 percent of available time on the basis of a 40-hour week, during fiscal year 1971.

Month	Hours available	Hours used	Percent used
1970:			
July	176	92	52
Aug.	168	83	49
Sept.	168	114	68
Oct.	176	114	65
Nov.	152	92	61
Dec.	172	95	55
1971:			
Jan.	160	104	65
Feb.	152	108	71
Mar.	184	131	71
Apr.	176	116	66
May	160	91	57
June	176	98	56
Total	2,020	1,238	[a]61

[a]Average.

Further analysis showed that, even though a CCTV system was in use, it did not necessarily indicate that anyone was benefiting from the telecast. During May 1971, for example, the system was reported as being in use a total of 91 hours. Hospital records, as shown in the following table, indicate that there were many hours included in the 91-hour total during which no one at the hospitals was viewing the telecast.

Hospital	Total hours telecasted	Total hours viewed	Total hours not being viewed	Percent of hours that telecast was not viewed
Omaha	91	58	33	36
Lincoln	91	39	52	57
Grand Island	91	29	62	68

A Lincoln VA Hospital official, who reviewed CCTV use at the hospital, made the following comments about the system's use during April 1971 which had 22 workdays, or 176 hours (based on an 8-hour day), available for programing.

--Network programing was scheduled for only 71 of 176 available hours. Twelve of the 71 hours did not require use of the CCTV network because tapes were being shown requiring only the use of a video tape deck.

--Only 59 hours of actual live programing was scheduled. This represented only about 33 percent of the available 176 hours. About 14 of the 59 hours were devoted to subjects other than medical and thereby further reduced the programing for professional people to 45 hours, or about 25 percent, of available programing time. We need help in this area badly because, after nearly 3 years of trying, we are still unable (as nonprofessionals in communication work) to program a 22-day month for more than 25 percent of an 8-hour day.

Our review showed that several other VA hospitals were making little use of their CCTV equipment.

NEED FOR EXCHANGE OF INFORMATION ON AVAILABILITY OF VIDEO TAPES

Several VA hospitals with CCTV have prepared video tapes on nursing procedures, nursing education, and lectures given by visiting medical specialists. For example, the Wood, Wisconsin, VA Hospital has produced over 100 tapes with its CCTV facilities and the St. Cloud, Minnesota, VA Hospital has produced about 200 tapes. The tapes are stored in their hospital libraries.

Wood and St. Cloud VA Hospital officials identified the following benefits in using video-taped programs: (1) tapes can be saved for future use, shared with other hospitals, and shown to the staff at convenient times, (2) taped programs are less costly than film if the recording equipment is already available, (3) taped programs provide closeup lectures of techniques not possible in the usual classroom setting, and (4) tapes could enable the hospital staff to view programs on monitors at their work stations.

VA hospital officials generally agreed that the exchange of tapes would be beneficial. VA, however, does not have a system for making a list of such tapes available to all VA hospitals with CCTV capabilities. We discussed the need for such a system with VA central office officials and were advised that they were aware of the need to distribute this type of information and were planning to take appropriate action.

CONCLUSIONS AND RECOMMENDATIONS

Under the present organizational structure, which has no central organization responsible for the overall management of CCTV activities, the ability of the VA central office to identify problems and to assess at the hospitals the effectiveness of their CCTV systems has been limited. As previously stated on page 4, a committee was formed as a result of the 1967 task force report but there is no evidence that it has ever met to consider the matters for which it was

established; therefore, we recommend that you establish a new committee and require that all requests for CCTV systems be reviewed and evaluated by that committee.

We recommend also that you assign to one organization within the VA central office the responsibility to develop an information system to disseminate to all VA hospitals with CCTV capabilities (1) information on successful and unsuccessful uses of CCTV and (2) lists of available video tapes. We recommend further that you assign responsibility for the establishment of criteria which hospitals could use to evaluate their CCTV systems.

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After reviewing our findings, conclusions, and recommendations, VA told us that it agreed with our recommendations.

We are sending copies of this report to the Chairmen of the Senate and House Committees on Veterans' Affairs, the Senate and House Committees on Appropriations, and the Senate and House Committees on Government Operations and to the Director, Office of Management and Budget.

We appreciate the cooperation and courtesy extended to us by VA personnel during our review.

Sincerely yours,

Gregory J. Ahart

Gregory J. Ahart
Director