THE USE AND RESOURCE AREAS OF AUDIOVISUAL MEDIA IN HOSPITALS

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Audiovisual Media

by

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GRADUATE COLLEGE

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ABSTRACT

The study involved some exploration of the various audio-visual aids that are currently available and also how these various media are being utilized in educational endeavors in medical facilities.

The research data was secured through a mailed survey instrument, initially to a pilot sample of six hospitals, selected as two private, two university hospitals and two county or Veterans' Administration institutions. Five out of the six questionnaires were returned. Then survey questionnaires were sent to 50 more hospitals selected at random, being careful to choose representatives of both public and private institutions, varying sizes ranging from medium sized to large county institutions, and located in all geographic areas of the United States. The survey questionnaire was addressed to the administrator of the hospital who then routed same to the persons involved. The pilot study was conducted from January 15, 1971 to February 15, 1971 and the actual survey from February 15, 1971

to March 22, 1971. An 80% response was obtained by March 15. An additional 15 letters and questionnaires were dispatched on March 16 and by March 22 a 100% response, or 50 hospitals, had answered.

Analysis of the data was then done relating to the following items:

1. Types of hospitals involved
2. Hospital size range according to beds
3. Number of hospitals which had special A-V departments with employees and special funds allocated
4. Types of audiovisual aids used
5. Aids which were most popular
6. Types of approved training programs conducted
7. Areas and departments making use of the audiovisual aids

Tables were constructed to illustrate the above items. Analyses and results revealed that all but one hospital did employ audiovisual aids in their various educational programs. The analyses showed that the most prevalently used aids were the slide projector, film projector, blackboards, tape recorder and overhead projector. Approved training programs were listed under 27 categories and 76 different departments were given as making use of the audiovisual aids. Seventeen out of the 50 hospitals did have a separate audiovisual department with an aggregate of 69 persons employed in these departments and a budget, as specified by four hospitals, of a total sum of $123,500.00.

ACKNOWLEDGMENTS

I wish to express here my thanks to the people who have helped in the preparation of this paper.

To Professor Dwan T. Wick, for his direction of the study.

To my Sister Colleagues for their constant interest and mutual support.

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CHAPTER I

INTRODUCTION

Chapter I includes a statement of the problem, limitations of the problem and some comments on the importance of the study. Following this, several terms are defined and the organizational plan of the remainder of the study is given.

THE PROBLEM

Statement of the Problem

The problem was to find out how hospitals were using audiovisual aids, what type of aids were used, and to discover how many hospitals actually are able or sufficiently interested to maintain a specific audiovisual department with special personnel and with specific funds allocated for its maintenance and function.

Limitations of the Problem

This study does not claim to be all-inclusive, but includes only 50 of the 6,651 hospitals currently in operation in the United States.

Also, no inquiries were directed toward investigating salary ranges for personnel in those hospitals which did have a specialized audiovisual department, since this varies so greatly and is often dependent upon such factors as:

1. Geographical area where the hospital is located

2. Size of the hospital

3. Specific training, educational background and practical experience of the individual seeking the position

In those hospitals not presently having a specific audiovisual department, no inquiries were made as to whether or not there were any immediate or long-range plans to establish such a department.

Importance of the Study

Since La Crosse State University offers firmly established courses in audiovisual education, both for the bachelor and graduate course areas, and with a moderate number of annual graduates from such programs, a study of this nature was considered important because:

1. General and specific medical interest in modern technological science can be revealed.

2. Insight can be given to determine whether or not graduates from an audiovisual media college program can now, or possibly in the near future hope to include and investigate medical facilities in their search for positions.

DEFINITION OF TERMS USED

Audiovisual

A term which refers specifically to teaching aids which employ chiefly two sense modalities, those of seeing and hearing.

Closed Circuit Television

A television program which is televised within an institution, rather than outside to the community.

Hardware

The actual equipment used to demonstrate the media -- such as film projectors, tape recorders and the like.

Paramedical

A term which refers to professions closely allied to medicine, a few examples of which would be medical technology, radiologic technology and pharmacy.

Patient monitoring system

An electronic device by means of which the vital signs, such as respiration and heart beat of a patient can be observed by trained personnel who are attending the patient.

Software.

The educational material itself, the film, the tape, and information transmitted on the hardware.

ORGANIZATION OF THE REMAINDER OF THE PROJECT

The remainder of this paper is as follows: Chapter II gives an overview of the current literature pertaining to this study; Chapter III explains the actual written survey procedure followed to obtain the information, and how the response data was treated; Chapter IV gives the actual responses to the questionnaire; Chapter V concerns resource areas for audiovisual software; Chapter VI gives a composite summary of all responses and the conclusions and recommendations of the writer.

CHAPTER II

REVIEW OF THE LITERATURE

Hospital-oriented periodicals have in the last ten years devoted many articles to the use of audiovisual media in various educational endeavors in a medical environment. Such media therefore, are no longer confined to a strictly academic program, but are used with increasing frequency also in educational aspects of medical service areas. Several books were especially useful in a clear orientation of the various types of media; however, there was a noticeable dearth of books devoted completely to audiovisual media in hospitals. A great variety of aids were discussed in periodicals and it was difficult to ascertain which aid seemed to have preference. Probably the older types of aids, such as the educational film, the overhead and the opaque projector and slides are still most commonly used. However, the recent literature also gave space to considerable experimentation which is now carried out with the more recent innovations such as programmed instruction, teaching machines, instructional television and computers. Many of the articles were devoted to a discussion of several of the visual aids. Audiovisual set-ups as described in the literature ranged all the way from the comparatively simple to amazingly elaborate arrangements in several hospitals.

LITERATURE PERTAINING TO THE USE OF VARIOUS AUDIOVISUAL MEDIA AS USED IN CERTAIN HOSPITALS THROUGHOUT THE COUNTRY --

Of great value in compiling a bibliographical listing were the yearly Cumulated Index Medicus - Subject Index,[1] the Cumulative Index of Hospital Literature[2] and the annual Hospital Literature Index.[3] The subject topics investigated were: Audiovisual, media, blackboard, colored slides, computers, films, film strips, flannel-board, opaque projector, overhead projector, photography, programmed instruction, radio, tape recordings, teaching machines, television. Especially helpful in selecting the hospitals included in the survey was the Guide Issue of Hospitals.[4]

Blackboard

This visual aid is probably the least sophisticated, the most simple, the most taken for granted as existing everywhere and perhaps the first one ever to be used. Perhaps it was for this reason that so few references were made in any articles. However, J.L.

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[1] Cumulated Index Medicus - Subject Index (Chicago: American Medical Association) Annual.

[2] Cumulative Index of Hospital Literature (Chicago: American Hospital Association) 5 year.

[3] Hospital Literature Index (Chicago: American Hospital Association) Annual.

[4] Guide Issue of Hospitals (Chicago, A. H. A.) August 1, 1970.

Towers in an article entitled: "Let Them See What You're Saying," referred specifically to the use of the blackboard for hospital department head meetings conducted by the administrator. He stated that effective speakers use the blackboard by placing key words in front of their audience as they speak. This visualization of important words summarizes the presentation and makes an added impression on the group.[5]

Colored Slides

This type of visual aid is comparatively easy and inexpensive to construct. The instructor has complete control of the visual field, the slides can be repeated any number of times and it is versatile in many ways. James Brown in A-V Instruction: Media and Methods claims that planning, shooting and presenting two by two inch slide stories represent unusual opportunities for developing functional and interesting student learning experiences.[6]

According to the literature, a number of hospitals have used sound slide presentations in some manner of instruction. Harvey Schoenfeld and Maurice I. May describe in "Project'Vis Ed" how one hospital devised an inexpensive way to train its employees. It is a hospital-developed personnel training program designed to fit

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[5] J.L. Towers, "Let Them See What You're Saying," Modern Hospital, LXXXV (Oct. 1955), p. 70-73.

[6] James W. Brown, Richard Lewis, Fred F. Harcleroad, A-V Instruction: Media and Methods (St. Louis: McGraw-Hill Book Company, 1969), p. 468.

into every department. The necessary equipment needed included a 35 mm. camera, self-made slides, a tape recorder and a sound slide projector. This particular project was developed for house-keeping employees. The first part of the script described in detail the importance of technique in good housekeeping practice and the second part illustrated the techniques described in the first part. Actual housekeeping personnel were selected to serve as the "actors". The entire budget for the project, not including the volunteered time, amounted to $10.40. The authors stressed that there were a number of advantages for such a project. This program can be done in almost every hospital department where repetitive orientation and training must be carried out for new employees; the slides can be used for refresher programs with older employees. Such a presentation has a more lasting impression and makes for greater uniformity of training.[7]

Of particular interest was an article by James C. McLean entitled "How to Use Audiovisual Communications," in which he described a particular use for color slides in hospitals:

> Color slides have proved to be an effective communications tool when the hospital makes a presentation to an outside group. Slides not only add visual impact to a talk, but they can be used to show important sections of the hospital normally barred to to the public.

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[7] H. Schoenfeld and M.I. May, "Project 'Vis-Ed' - An Inexpensive Way to Train Employees," Hospitals, XXXIV (October 16, 1960), p. 66-67.

For National Hospital Week, a 250 bed hospital prepared a set of more than 100 color slides depicting activities of all departments of the hospital for showing to community, civic and fraternal organizations. The presentation proved so successful that it has become a year-round publicity tool.

The organizations were invited to hold their luncheon and dinner meetings at the hospital, and a nominal charge covered food costs. Between 60 and 70 of the slides were selected on the basis of the audience's age and interest for each program.

With a department head as guide, groups of 10 persons were then taken on a brief tour of public areas of the hospital. When passing restricted areas, the guide would remind the group of the slides it had seen of those parts of the hospital.

The color slides also were shown in area high schools, in cooperation with vocational guidance instructors to interest students in a wide range of hospital careers.

The utilization of color slides was, according to the administrator, the most effective way of giving the community a graphic view of the day-by-day routine of a complete organization.

In addition to being an effective public relations aid, the hospital's presentations resulted in many contributions to the hospital and aided in the recruitment of personnel.[8]

Another hospital made extensive use of slides for its food service employees - as described by W.S. Middleton and Stephan A. Konz in "Slides Plus Recorded Commentary Instruct Food Service Workers," combining a programmed instruction and slides with recorded commentaries, to instruct these workers in various techniques.[9]

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[8] J.C. McLean, "How to Use Audiovisual Communications," Modern Hospital, CVI (February, 1966), p. 97.

[9] R. Middleton and Stephan A. Konz, "Slides Plus Recorded Commentary Instruct Food Service Worker," Hospitals, XXXIX (Oct. 16, 1965), p. 91-95.

Colored slides are also used in hospitals to record surgical operative techniques and other instructional techniques.

Computers

It was gratifying to note that the medical profession has already taken advantage of the latest in electronic equipment. Frederick Knirk and John Childs in Instructional Technology affirmed that computers are here to stay. One probable use for computers is medical diagnosis and prescription of treatment. Electronic equipment can already monitor an ailing patient, and send an alarm when help is needed. Electrocardiographic tracings are displayed continuously on a cathode-ray tube in an intensive care unit. Nurses may one day see computers with a built-in bedside manner aiding the family doctor.[10]

In a medical application, Brown, Lewis and Harcleroad, state:

> Computers can perform arithmetic computations and much more. The computer is an important tool of thought. It does hard work extremely fast. Computers can perform a sequence of operations according to a set of programmed instructions. Computers are capable of making logical comparisons between two facts or among a vast number of facts. Computers can search through extensive files of randomly organized information at almost inconceivable speed and retrieve and reproduce desired data in logically organized form. Computers are extremely accurate, capable of performing hour after hour without mistakes.[11]

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[10] Frederick G. Knirk and John W. Childs, Instructional Technology (Chicago: Hold, Rinehart and Winston, Inc.), 1968.

[11] James Brown, Richard B. Lewis and Fred F. Harcleroad, A-V Instruction: Media and Methods, (St. Louis: McGraw-Hill Book Company, 1969), p. 510.

An editorial which recently appeared in Hospitals under the title of "Medical Students Diagnose, Treat Computer Patients," stated that students at the University of Illinois in Chicago are actually diagnosing and treating computer patients, by use of a device similar to a T-V set. This device has a keyboard which is linked to a computer, to interview, diagnose and treat patients. However, the patients exist only on tape. The medical staff created the bank and the students question the patients; also request results of physical examination and laboratory tests all with keyboard device, then prescribe treatment and learn if it is appropriate. With such a simulation program the student becomes a doctor learning to make judgments.[12]

However, to be honest, not all is as yet perfect with computer treatment of patients, as John Mayne notes in "The Computer and Its Potential for Medicine:"

> One of the primary difficulties to be faced in utilizing computer technology in medicine is defining the data physicians use in making medical decisions and discovering how physicians use these data for their decisions. This information is required for the many steps involved in designing a computer-based system and in writing the programs. It is probable that computers will be most effective in medicine when physicians are able to find new methods for providing health care service that will unite the speed and memory of these remarkable information-processing machines with the judgment and with the pattern recognition abilities of physicians. In any event, this combination must be supplemented in the person of the physician with the human qualities of respect, concern, sympathy, and understanding that no machine can ever duplicate.[13]

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[12] Editorial - Hospitals, XL (November 16, 1969) p. 109-110.

[13] John Mayne, "The Computer and Its Potential for Medicine," Annals of Internal Medicine, LXX (January, 1969) p. 213 and 214.

The computer does, nevertheless, perform a great service in the modern hospital. In hospitals where it is used, all patient billing, employee payroll and even some aspects of medical record keeping are performed via the computer.

Films

As an introduction, James Brown, Lewis and Harcleroad in A-V Instruction: Media and Methods state that a motion picture film is actually a series of multiple still pictures flashed rapidly on a screen. It acts upon the two senses of sight and hearing at one time and thus contributes to effective learning.[14]

No article was found which was devoted entirely to the subject of films, but several had good references. The first by M.I. Hess, "Audiovisual in Hospital Libraries," leads the reader to believe that perhaps films are still the most popular type of aid used in hospitals. Mr. Hess reveals that on the basis of information published by the American Medical Association and other sources, a minimum of 15,000 professional film showings are currently being held each year, to a total audience of approximately 500,000 doctors, medical students and nurses. This does not include the thousands of showings to small groups for teaching and discussion purposes.[15]

An item of practical interest and value mentioned by James McLean in "How to Use Audiovisual Communications," was the fact

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[14] Brown, A-V Instruction: Media and Methods (St. Louis: McGraw-Hill Book Company, 1969), p. 284.

[15] M.I. Hess, "Audiovisual in Hospital Libraries," Hospital Progress, XLII (May, 1961), p. 52-58.

that a survey of hospitals revealed that few hospitals were familiar with the "Film Reference Guide for Medicine and Allied Sciences," available from the U.S. Government Printing Office in Washington, D.C. for $2.50 (U.S. Public Health Service publication 487). This 400 page catalog lists and describes motion pictures and filmstrips available from government, commercial and industrial sources in the U.S. under subject headings and by film title. Distributors are listed and most of the films are available to hospitals free or for a small charge.[16] Some hospitals produce their own films of surgical techniques and conditions that could aid in teaching.

Filmstrips

In the text A-V Instruction - Media and Methods, James Brown and Associates state succintly that a filmstrip is a series of still pictures placed in a certain order and dealing usefully in a wide variety of instructional fields from spelling to nursing, mechanics, economics, sciences, health and safety education.[17] This type of aid does not seem as prevalent in hospitals as some of the others. However, according to James McLean's survey of hospitals as reported in his article "How to Use Audiovisual Communications" he found one hospital had prepared a film-strip for fund-raising purposes. The title of the film was "Keep This Door Open"

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[16] McLean, "How To Use Audiovisual Communications," Modern Hospital, CVI (February, 1966), p. 97.

[17] Brown, A-V Instruction: Media and Methods (St. Louis: McGraw-Hill Book Company, 1969), p. 220.

and had a professionally recorded 33 rpm disc sound recording that could be easily adapted to small or large group showings.[18]

Flannelboard

Even though this relatively simple and inexpensive visual aid was rarely referred to in the literature, one author, Anne Vestal, in "Management Message Emphasized by Visual Training Aids," along with the mention of other aids, does give a passing reference to it and gives a hospital flavor to her comments when she suggests ideas for its construction. Board can be obtained from the hospital carpenter shop, flannel from the sewing room, scraps of colored felt from the occupational therapy department.[19]

A recent useful innovation of this aid was noted by Brown and associates in A-V Instruction: Media and Methods as the development of hook and loop materials instead of flannel because of a higher holding power and capacity to support greater weights.[20] Hospitals make extensive use of bulletin boards for employee notices, public relations announcements, etc.

Opaque Projectors

James McLean found opaque projectors in 40% of hospitals which he surveyed. These projectors use a light source and a system

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[18] McLean, "How to Use Audiovisual Communications," Modern Hospital, CVI (February, 1966), p. 97.

[19] A.J. Vestal, "Management Message Emphasized by Visual Training Aids," Hospital Topics, XLV11 (May, 1969) , p. 69-74.

[20] Brown, A-V Instruction: Media and Methods (St. Louis: McGraw-Hill Book Company, 1969), p. 428.

of mirrors whereby any opaque image can be projected on an enlarged screen. The advantage here is that immediate projection in original colors is available without delay or processing. Such an instrument is especially useful in projection of anatomical illustrations. One disadvantage of this type of projector is the requirement of an almost completely darkened room.[21]

Overhead Projector

Simple operation, a lighted room, immediate image by writing on a transparency are the favorable features of this aid. One author has included this aid in a hospital application. Mr. James McLean in "How To Use Audiovisual Communications," says that transparencies of reports can be prepared on some photocopy machines which are generally found in hospitals. Several hospitals have found the overhead an ideal device for showing reports at medical staff and trustee meetings, department head conferences, and other sessions.[22]

Photography

Picture taking can be both a hobby and a powerful aid in teaching. It was noted with interest that medical photography as an audiovisual aid is not something strictly twentieth century, but goes back in origin to the man whose drawings of the human body still awe modern doctors -- Leonardo da Vinci.

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[21] McLean, "How To Use Audiovisual Communications," Modern Hospital, CVI (February, 1966), p. 97.

[22] Ibid., p. 97.

Pictures are constantly being used more frequently for M.I. Hess records the observations as they appeared in the Journal of Medical Education:

> A great proportion of the objective content of medicine is visual and can be pictured. The eyes are the principal sense organ for recording data pertinent to accurate diagnosis and treatment. Pictures, whether images or real patients seen or phenomena transmitted through teachers, comprise a very high proportion of the material learned by students ... It should be emphasized that the language of pictures is direct, without semantic confusions, and with a mini mum of cultural obstacles, although these do exist. This language of pictures is being harnessed for our uses today, thanks to newer and ever better media of communication. Medical education has been one of the favored beneficiaries of graphic and photographic processes in all their forms ... Cheaper methods of photography and photoduplication will one day make possible inexpensive pictorial textbooks which will shame LIFE magazine. However, until the visual millenium arrives, medical educators m must apply consciously the concept of a visual literature until it is as much taken for granted as is the verbal literature.[23]

Medical photography in the hospital has several functions. It is useful in better patient care, the advancement of medical knowledge, more adequate communication and helpful in teaching.[24]

A photography department in a hospital comes into an active role in many hospital activities -- public relations, pictures for a hospital magazine, employee news, newspaper releases, annual reports, special events, and human interest stories.[25] M.I. Hess in one article has stated well the medical profession's reaction to

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[23] M.I. Hess, "Audiovisual in Hospital Libraries," Hospital Progress, XLII (May, 1961), p. 56.

[24] William Reals, "Medical Photography," Hospital Progress, XLVIII (November, 1967), p. 52-56.

[25] Ibid., p. 52-56.

this valuable aid, when she says:

> The physician's dedication to research has driven him to seize upon every available aid in his time and ply it into a means of conveying his findings and observations to his co-workers and posterity. In recent years, photography is one such aid which has received widening recognition of its value as a diagnostic and treatment aid. Joseph P. Hackel, president of Medical Films, already has predicted that in the near future a physician will photograph and record every new patient's history -- clinical, pathologic, and psychogenic -- as a continuous aid in therapy. The camera sees more than the human eye and retains more than the human memory. This explains why there are so many more pictures in textbooks now than there used to be, and why stereoscopic slides of the human anatomy have proven to be so popular.[26]

However, in spite of what might be said of interest in and usefulness of a photography department in a hospital, what could still serve as the greatest impetus in the establishment of such a department in every approved hospital would be the fact that, according to one author, the day is not too far distant when a department of medical photography may be required by the Joint Commission on the Accreditation of Hospitals.[27]

Programmed Instruction

This type of media deals with self-administered instructional materials, carefully sequenced and logically organized. There were two interesting articles with a strong slant toward hospital utilization of such an aid. The first of these by Herman Feldman entitled: "Programmed Instruction - What It Is - How the Hospitals Can Use

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[26] M.I. Hess, "Audiovisual in Hospital Libraries," Hospital Progress, XLII (May, 1961), p. 56.

[27] Reals, "Medical Photography," Hospital Progress, XLVIII (November, 1967), p. 53.

It" appeared in Modern Hospital. He believes that this new tool for hospital inservice education programs promises quicker mastery of subjects by employees and provides greater flexibility in scheduling their training. It is closely allied to the teaching machine, yet can be used independently of it. He outlines the main features of this new assault on pedagogy as dealing chiefly with three principles: 1) active participation, 2) small steps, and 3) reinforcement. The writing of the program is the most demanding part, for the construction of an effective program demands intelligence, verbal ability, and imagination, as well as thorough knowledge of the subject. Goals must be specified in observable and precise terms.[28]

The second article in JAMA, "Programmed Instruction in Interviewing -- an Experiment in Medical Education," by Enelow, McKinney and Wexler discusses an innovative experiment that was conducted as a means of helping to train medical students in the very delicate and important art of interviewing patients -- an initial procedure so very vital in the adequate diagnosis and treatment of patients. The article is explanatory of the exact procedure followed, but in brief, could be stated as follows:

> Some principles of programmed instruction were applied in producing video tapes for the purpose of teaching interviewing skills. The goal was to teach the physician or medical student to recognize behaviors of an interviewer which either encourage or hinder useful communication from the patient. The optimal interview was defined as one in which the greatest amount of

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[28] H. Feldman, "Programmed Instruction: What It Is; How Hospitals Can Use It," Modern Hospital, XCIX (October, 1962) p. 75-79.

information relevant to diagnosis and treatment is obtained within realistic time limits. A set of interviewing principles was developed, and each script was designed to demonstrate a single principle in an appropriate clinical situation. The interviews, conducted with simulated patients, are interrupted at intervals; a choice of interviewer's actions is offered and the consequences of each choice are illustrated and explained by a narrator. Evaluation research indicates that this can be an effective method of teaching interview skills.[29]

Radio

The use of the radio has a rather interesting and unique application in the health field and new uses are constantly being discovered. From an educational standpoint, James Brown describes how medical lectures originating at the University of Wisconsin reach staff members of participating hospitals, throughout the state. Each lecture is pre-taped, and then transmitted via regular telephone lines on a conference call arrangement.[30]

Another author, Arthur Morrish and his associate Anna O'Connor describe an emergency radio network and stress the fact that in times of emergency it is not always possible to rely on conventional means of communication among health officials at the local, state and federal levels during disasters.[31]

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[29] Allen J. Enelow, Leta McKinney Adler and Murray Wecler, "Programmed Instruction in Interviewing - An Experiment in Medical Education," JAMA, CCX11 (June 15, 1970), p. 1843-1846.

[30] Brown, A-V Instruction: Media and Methods (St. Louis: McGraw-Hill Book Company, 1969), p. 335-339.

[31] Arthur Morrish and Anna R. O'Connor, "Cyclic Scheduling," Hospitals, XL1V (February 16, 1970), p. 66-71.

A well coordinated and flexible hospital radio system was also described in an editorial. This system is currently operating in Mississippi to help the hospitals coordinate the personnel and facilities of a 38-county emergency system. It links the hospital emergency rooms with heliocopter rescue operations, the state highway patrol and ambulance services. The extended coverage makes the radio network an important factor in efficient emergency operations and also serves the needs of the hospitals for day to day inside communications to staff physicians, nurses, administrative and maintenance personnel.[32]

Tape Recordings

There are a number of concrete applications of tape in the medical area. Paschal F. Lucchesi in "The Personal Touch - by Tape Recorder," describes how one hospital uses pre-recorded tapes to prepare patients mentally and emotionally for their admission to the hospital, for they realize that first impressions are so important in initial contact with patients. Here is how it is done - a 3-minute recorded message with preadmission tips for patients including how to enter the hospital, what to bring, and what to expect, was a logical outgrowth of this desire to prepare patients. When the admissions clerk telephones a patient at home with the admission hour and date information, the clerk simply adds:

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[32] Editorial, Hospital Topics, XLV111, (June, 1970) p. 18.

"Please stay on the line for an important recorded message." With that she pushes a button which starts the two minute tape and then is free to make another call. Patients say the message is helpful, telling them things they worry about. The message is on a continuous loop within a tape cartridge, the volume is pre-set and then it automatically hangs up on the phone line and shuts itself off. Messages can be changed by inserting a new cartridge. Players cost approximately $140.00 each.[33]

Another pertinent article written by G.L. Deschambeau, was found in Modern Hospital. In this article he describes a valuable use of tape in the nursing service area. The nurse tapes her patient comments an hour before her shift is over. It takes no more than 12 minutes to make a report on a 50-bed wing and additions are easy. Because each oncoming nurse listens to the two previous shift reports before she goes on duty, she has a continuous flow of information on each patient for a 24-hour period. The benefits of this continuity are better bedside care, higher level of professional productivity, and nursing time is saved. Further, medications, treatments and the routine care can be started right on schedule and if a nurse comes in late she can listen to the report after the others have finished listening.[34]

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[33] Paschal Lucchesi, "The Personal Touch - by Tape Recorder," Modern Hospital, CV111, (February, 1967), p. 41-44.

[34] Deschambeau, G.L., "Tape-Recorded Nursing Reports Save Time, Improve the Care," Modern Hospital, 108:41-44, February, 1967.

Various teaching centers also have tapes on medical subjects in storage. These can be retrieved at any time via dial access by doctors and nurses. Such a service is valuable in helping to keep medical personnel well acquainted with latest in medical information and techniques.

Teaching Machines

Very few articles were published relating to the use of teaching machines in medical facilities. However, an editorial in Hospitals, entitled, "Teaching Machines, Programmed Books, Help in Training of Patients and Personnel," describes how some hospitals currently use a teaching machine program in conjunction with a series of film-strips, with recorded commentaries to teach diabetic patients about diets. This is a well-rounded program dealing with basic information about the disease, about the special diet, medications, physical health and tips for daily living.[35]

Jane Hartman in her article, "Teaching Machines Can Help Dietitians," which appeared in Modern Hospital outlined a method of automated instruction which offers an opportunity to provide programs without trained supervision. Specifically, she stated that teaching machines may be an effective tool in helping food service managers maintain training programs for subsidiary personnel; also for teaching diabetic patients.[36]

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[35] Editorial, Hospitals, XL1 (March 1, 1967), p. 100-101.

[36] J. Hartman, "Teaching Machines Can Help Dietitians," Modern Hospital, C11, (June, 1964) p. 130.

Television

This is yet the most glamorous of the newer technological aids to education. Reginald Hall in "Audiovisual Aids in Medical Education" pointed out that this medium is being used more frequently in postgraduate and continuing medical education. Television is used in two ways: firstly, as a closed circuit system in departmental units and in large university circuits; and secondly in open-circuit television broadcasted as postgraduate programs. Closed-circuit television is mainly used to offer students an identical "privileged observer's" view of various procedures -- as anatomical dissections or surgical operations. Open-circuit television has been used to broadcast grand medical rounds to community hospitals on a regular basis.[37]

To substantiate the fact that the closed circuit type of T-V is probably the one most useful to hospitals, James McLean enumerates the type linked to all television sets in patients' rooms on a special channel. It is used for news broadcasts prepared by a local radio station's staff as well as for other special hospital programs. The system is also used for "visiting" patients, particularly by children who are restricted from regular visits, and for "visits" with patients in isolation or other restricted areas.

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[37] R. Hall, "Audio-Visual Aids in Medical Education," British Medical Journal, IV (October 4, 1969), p. 40-41.

Another aspect of closed-circuit television is the patient monitoring system which has now been installed in many hospitals.[38]

And still another use of closed-circuit television in a hospital is described by Jane Hartman in "CCTV and Tape Recorders Help Extend the Dietitians Reach," Modern Hospital. In the dietetic area, television could be used to give visitors a "peep behind the scenes" into each area of food service department. It can also be used to monitor food serving.[39]

The researcher considered four articles from periodicals of such interest and import as to warrant a separate review and consideration. The authors of these articles seemed to give a definite indication in which direction hospitals are going in relation to the present and possible future use of audiovisual materials and also as to the possibility of position openings for audiovisual media specialists. All revealed that hospitals have definitely come to a greater utilization of visual aids in all aspects of their educational programs.

The first of these articles by Mary A. Hess entitled, "Ongoing Inservice Education Program." Throughout, she posed the question - "What is the objective of any inservice education program? The answer to this is, of course, improved patient

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[39] J. Hartman, "CCTV and Tape Recorders Help Extend the Dietitian's Reach," Modern Hospital, CX, (April, 1968), p. 139.

service, and if the administration and personnel of a hospital are interested in this ultimate goal, they must be committed to furthering inservice education along with the various educational techniques employed to make the presentation interesting and challenging.[40]

The author of the article synthesized very well her ideas on education and service when she stated:

> Recognizing the need for improved patient service, hospitals are placing increased emphasis upon the development of inservice education programs. Because these programs upgrade the knowledge and techniques of hospital personnel it is reasonable to assume that they will also upgrade the service which hospital personnel render to patients. In this article, the author describes various aspects of the inservice education program operative at her hospital and the way in which it enables the hospital to achieve its over-all objectives.[41]

Throughout the article she emphasized the importance of an education department to coordinate inservice activities of all departments of the hospital.

In the second article, Richard Davidson in "Education and Hospitals" has told the public that education is just now coming of age in America's hospitals. Definite efforts are being made to attract youth to health-centered careers. Hospitals are endeavoring to close the gap between education and service by a continuing

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[40] Mary A. Hess, "An Ongoing Inservice Education Program," Hospital Progress, L (July, 1969), p. 78-82.

[41] Ibid., p. 78.

program of education and staff development.

A growing number of hospitals now have a full-time position of director of medical education to meet the need for improved graduate and postgraduate physician education. To carry out such a program, closed-circuit television is becoming increasingly popular and useful. Hospitals are beginning to realize that continuing education is a tool of management, a long term investment in time, money and people. Multi-media instructional techniques are becoming more widely used and training specialists are emerging to coordinate all education activities.[42]

In the next article, "Annual Administrative Reviews - Education" by Sister Florence Urbine, RN, it becomes obvious that hospitals are becoming involved -- for the author verifies that the establishment of hospital wide education and training departments and the involvement of hospitals in community education programs were two of the major trends in health care education last year.

Multimedia approaches to education and training programs in hospitals are becoming more and more evident as the proper utilization of elaborate training aids continue to be reported frequently in the literature.

More than ever before, the community is beginning to regard the hospital as a comprehensive health center that should

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[42] Richard Davidson, "Education and Hospitals," Hospitals, XLIII, (April 1, 1969), p. 79-82.

educate not only the sick but their families and the rest of the community as well, about health and illness.[43]

Perhaps one of the most elaborate hospital-located audiovisual arrangements is that described by R. E. Adams in an article "Hospital's Learning Center Uses Multimedia Approach," in the March 16, 1969 issue of Hospitals. In this article the author explained how, in an effort to evaluate the performance standards of its employees, the Research Hospital and Medical Center in Kansas City, Missouri established an extensive audiovisual education center that utilizes the latest automated equipment and multimedia concepts.[44]

Evidence has shown that the training used will result in a higher level of employee productivity, lower personnel turnover and reduced absenteeism due to better morale.[45]

The author states that the Center's goals include these:

> The overall objectives of the hospital's education center are: 1) To provide facilities, audiovisual equipment, and materials for the education and training of an increasing number of professional nursing students of the Research Hospital School of Nursing. 2) To achieve a more effective learning experience through the integration of audiovisual materials and techniques with traditional educational methodology, such as lectures, discussions, demonstrations, and clinical experience. 3) To provide facilities and instructional aids for a number of hospital training programs including inservice training, educational efforts of the medical staff, professional schools, and supervisory and management development training. 4) To provide

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[43] Sister Florence Urbine, "Annual Administrative Reviews-Education," Hospitals, XLIV (April 1, 1970), p. 67-71.

[44] R. E. Adams, "Hospital's Learning Center Uses Multimedia Approach," Hospitals, XLIII (March 16, 1969), p. 52.

[45] Ibid., p. 52.

> adequate space and audiovisual equipment for conferences and seminars for all hospital personnel and hospital-related groups.[46]

The hospital mentioned has aimed to reach its training goals by means of a multimedia approach in audiovisual techniques. The entire curriculum design and the facilities employed are geared toward providing efficient and effective educational experiences for the entire hospital staff. The faculty of the hospital's school of nursing are constantly exploring new avenues for integrating audiovisual techniques with traditional teaching methods.[47]

How can a medical facility which is usually considered as a strictly professional and service-oriented institution, concomitantly be involved in educational endeavors ? The author of this article enlightens the reader in this area by giving a description of the method of procedure:

> Although hospitals generally are centers for formal education and training in day-to-day hospital operation, many people are educated as educators but are not trained as instructors. Consequently, in conjunction with the new center, a 40-hour course entitled "Methods of Instruction" has been established. It includes nine hours on the operation and application of the wide range of electronic and other audiovisual equipment. Ultimately it will be given to every instructor in the professional schools and to every department head, assistant department head, and supervisor who is assigned to instruction within a department. At present, only those personnel who have taken the instruction course are authorized to use any of the audiovisual equipment in the center.[48]

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[46] Ibid., p. 53.
[47] Ibid., p. 53.
[48] Ibid., p. 54.

Even though hospital administrative personnel may evince interest in audiovisual equipment, they may not be in a position to provide the ultimate in this area. However, it is of value to consider what one hospital has included in a useful audiovisual center.

> The center includes an auditorium which seats 145 persons; two identical classrooms, each of which seat 35 persons; a conference room that seats 26 persons; a projection booth; a television control room; and other supportive facilities, including offices and lounges. All the teaching areas are air-conditioned and are carpeted, painted, and upholstered in scientifically selected colors that provide the right atmosphere for both teaching and learning.
>
> The classrooms and the auditorium of the teaching center are fully equipped with an array of audiovisual projectors that can be controlled by the instructor. from a panel located on the lectern at the front of the room.[49]

The auditorium is used for large classroom instructional activity, such as conferences, seminars, panels and discussions. In the stage area of the auditorium are found the master stereo sound system, three electrically operated projection screens, rear-screen projector, eight microphone outlets for panel discussions, six desk and chair sets, six magnetic tack boards, two magnetic chalk boards, instructor's lectern with electronic pointer, fixed and neck microphones, panel of switches to control sound and lighting, automatic threading motion film projector, two slide projectors, tape recorder, closed circuit television system, spotlights and telephone lecture loud speakers.[50]

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[49] *Ibid.*, p. 54.

[50] *Ibid.*, p. 54.

The classrooms contain various types of projectors, screens, instructor's lectern, master console, telephone lecture equipment and closed circuit television monitors.[51]

The author describes another facility, the student-response system, which is a unique and helpful instructional aid.

> The student response system provides an individual "responder unit," with four buttons at each set in the classroom. The student indicates answers to a question by merely pressing one of the buttons. Meters on the lectern console indicate to the instructor the percentage of the students that understand the material presented. A display of small lights that conform to the seating arrangement indicate how each student responded to a specific question. The console also includes 35 individual digital counters that correspond to the seating arrangement. At the end of a testing period, a total point score for each student in the group is indicated on the counter.
>
> The system requires that all students respond to a question or questions; it permits the instructor to determine immediately what material must be restated and when the class can move on to new subject matter.[52]

Finally, the author has revealed how this medical center has been evaluated and how administration has justified the extensive financial cost involved in establishing and maintaining a facility such as exists in this Research Hospital and Medical Center.

> Because wage costs are rising, more must be done by fewer people. This goal can be achieved through increased salaries to better people, and by improvement of their performance through better training. The results can be greater output from a smaller more dedicated labor force, with a reduced payroll as a result.
>
> The teaching center already has improved morale more than a pay raise could. The hospital's employees realize the center is for them; thus they feel more important and more a part of the hospital. This alone helps them do their work better and improves their ability to absorb training which, in turn, further improves their standards of performance.[53]

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[51] *Ibid.*, p. 54.
[52] *Ibid.*, p. 56.
[53] *Ibid.*, p. 56.

CHAPTER III

THE PROCEDURE, TREATMENT OF DATA, AND HYPOTHESIS

Research of any depth is essentially based on surveys of some type which form the basis for an accumulation of statistics which, in turn, help to prove certain facts. This chapter explains a method of procedure used in an effort to determine whether or not a good percentage of hospitals surveyed actually had a specified audiovisual department, with a regular staff and definite allocation of funds in a budget. Since education, either formal or informal, usually serves as an impetus in the use of various educational media, the researcher considered the types of approved training programs conducted in hospitals as a determining factor in the number and types of audiovisual media employed. Closely connected with the educational endeavors were the aids that were employed and the respective hospital departments making use of them.

THE PROCEDURE

In order to obtain the necessary information, to determine the use of audiovisual media in hospitals, initially a pilot study of six hospitals was carried out. For the selection of these hospitals the researcher consulted the medical library of a local hospital and used the Guide Issue of the Journal of the American Hospital Association, August 1, 1970, Part II. This issue gave a wealth of information on hospitals including the listings of Health Care Institutions, the American Hospital Association Membership hospitals, a listing of Health Organizations, Agencies and Educational Programs, and Hospital Statistics. All hospitals were listed alphabetically by state and also alphabetically by city within each state. The researcher, randomly, selected six hospitals which represented various sizes and types and were located in divergent geographical areas of the United States.

The hospitals included were:

Milwaukee County General Hospital - Milwaukee, Wisconsin

University Hospitals - Seattle, Washington

Mt. Carmel Mercy Hospital - Detroit, Michigan

Mercy Hospital - Toledo, Ohio

Veterans' Administration Hospital - Long Beach, California

Loma Linda U. Hospital - Loma Linda, California

The actual mailing procedure for the survey consisted, first of all of a letter of introduction from the researcher, explaining the reason for the survey. The sample of the letter shown is in Figure 1.

Figure 1

COVER LETTER SENT WITH QUESTIONNAIRE

Dear Administrator:

In partial fulfillment for the requirements of a Master's Degree in Audiovisual Education, I am working on a research project entitled: "The Use and Resource Areas of Audiovisual Media in Hospitals."

I would very much appreciate it if you would please take a few minutes of your time, or refer to someone, the completion of the form enclosed.

Any additional data or information you wish to offer will be accepted with appreciation.

Thankyou for your help in this project.

Sincerely yours,

Sister Ann Petrone Weibel, RRL

Medical Record Department

St. Francis Hospital

La Crosse, Wisconsin 54601

Included with the letter was a check-off type of questionnaire, and a self-addressed, stamped envelope which would lend assistance and ease for a prompt response.

A copy of the questionnaire is shown in Figure 2.

Figure 2

HOSPITAL SURVEY QUESTIONNAIRE - Audiovisual Education

NAME OF HOSPITAL ______________________________

ADDRESS ______________________________
Street

____
City State Zip Code

Size of Hospital ____________ (beds) ________________ (bassinets)

Type of hospital: Private ________ University ________

Federal ________ Other ________

County ________

Does your hospital have an organized and separate Audiovisual Department ? _____ If so, number of people employed ________

Budget allocated ________________ (amount per year)

<u>Please check the approved training programs conducted in the hospital</u>:

_____ Residency

_____ Internship

_____ School of Nursing

_____ School of Anesthesia

_____ School of Radiologic Technology

_____ School of Medical Technology

_____ School of Medical Record Science

_____ Administrative Residency

_____ Other approved programs ______________________________

(Figure continued)

Types of audiovisual equipment available and used (please check)

1. ____ Film Projector
2. ____ Tape Recorder
3. ____ Closed Circuit T-V
4. ____ Overhead Projector
5. ____ Slide Projector
6. ____ Programmed Instruction
7. ____ Opaque Projector
8. ____ Photography Equipment
9. ____ Blackboards
10. ____ Film Strip Projector
11. ____ Flannel Boards
12. ____ Teaching Machines
13. ____ Graphics, Models, Flip Charts
14. ____ Loop Boards
15. ____ Patient monitoring system
16. ____ Video-Tape Equipment
17. ____ Computer - Data Processing Equipment
18. Other

____

____

Please List Areas or departments which used audiovisual equipment

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

Thank you: Sister Ann Petrone, RRL - St. Francis Hospital,

La Crosse, Wisconsin 54601

Five of the six hospitals responded to the questionnaire. An 83% response was considered as good. One point of interest in the pilot study was the fact that three out of the five hospitals were equipped with a separate audiovisual department.

Since no special difficulty was encountered with the questionnaire, an additional fifty hospitals were selected in the same manner as the pilot study selection. The Guide Issue of the Journal of the American Hospital Association was again used and each State was taken as it came alphabetically and effort was made to select at least one hospital from each state. Because of the small geographic area involved and a sparsity of hospitals existing, several of the smaller states were excluded. Some effort was made to include a variety of types of hospitals including private, federal, county and university hospitals. As far as size range was concerned, a few smaller hospitals were selected but the majority were from between the 300 to 500 plus bed range. The researcher's chief reason for avoiding inclusion of a greater number in the below 300-bed category was because the larger institutions would more likely have a specific audiovisual department and also be more apt to conduct approved training programs. Thus, there would be a greater likelihood for more extensive use of audiovisual equipment.

The listing of the fifty hospitals which were chosen and answers received are found in Table 1, Part 1-2-3 which follow.

Table 1 - Hospital Listing

Part 1

Name of Hospital	Address
1. St. Joseph Hospital	1. Houston, Texas
2. Mobile General Hospital	2. Mobile, Alabama
3. Barnert Memorial Hospital	3. Paterson, New Jersey
4. Arkansas Children's Hospital	4. Little Rock, Arkansas
5. University of Wisconsin Hospitals	5. Madison, Wisconsin
6. St. Vincent's Hospital	6. Birmingham, Alabama
7. Indiana University Hospital	7. Indianapolis, Indiana
8. Californa Hospital Medical Center	8. Los Angeles, California
9. Tucson General Hospital	9. Tucson, Arizona
10. Kaiser-Permanente Medical Center	10. San Francisco, California
11. Louisville General Hospital	11. Louisville, Kentucky
12. St. Luke's Hospital	12. Duluth, Minnesota
13. Herrick Memorial Hospital	13. Berkeley, California
14. Santa Rosa Medical Center	14. San Antonio, Texas
15. De Paul Hospital	15. St. Louis, Missouri
16. Jackson Memorial Hospital	16. Miami, Florida
17. St. Paul-Ramsey Hospital	17. St. Paul, Minnesota

Table 1 - Hospital Listing

Part 2

Name of Hospital	Address
18. Providence Hospital	18. Seattle, Washington
19. University Hospital	19. Jackson, Mississippi
20. Iowa Methodist Hospital	20. Des Moines, Iowa
21. Providence Hospital	21. Anchorage, Alaska
22. St. Vincent Hospital and Medical Center	22. Toledo, Ohio
23. Austin State Hospital	23. Austin, Texas
24. Georgetown University Hospital	24. Washington, District of Columbia
25. University Hospital	25. Salt Lake City, Utah
26. Providence Hospital	26. Kansas City, Kansas
27. St. Joseph Hospital	27. Flint, Michigan
28. Touro Infirmary	28. New Orleans, Louisiana
29. Veterans' Administration Hospital	29. San Francisco, California
30. Grant Hospital of Columbus	30. Columbus, Ohio
31. Denver General Hospital	31. Denver, Colorado
32. Veterans' Administration	32. Brooklyn, New York
33. St. Joseph's Hospital	33. Milwaukee, Wisconsin
34. Sam Houston Memorial Hospital	34. Houston, Texas

Table 1 - Hospital Listing
Part 3

Name of Hospital	Address
35. Creighton Memorial - St. Joseph Hospital	35. Omaha, Nebraska
36. St. Vincent's Hospital	36. New York, New York
37. St. Vincent's Hospital	37. Los Angeles, California
38. Baptist Memorial Hospital	38. Memphis, Tennessee
39. Bannock Memorial Hospital	39. Pocatello, Idaho
40. Johns Hopkins University Hospital	40. Baltimore, Maryland
41. Baylor University Medical Center	41. Dallas, Texas
42. St. Elizabeth's Hospital of Boston	42. Brighton, Massachusetts
43. Sunrise Hospital	43. Las Vegas, Nevada
44. Grant Hospital	44. Chicago, Illinois
45. Magic Valley Memorial Hospital	45. Twin Falls, Idaho
46. St. Vincent Hospital	46. Santa Fe, Mexico
47. University Hospital	47. Augusta, Georgia
48. Mississippi Baptist Hospital	48. Jackson, Mississippi
49. Our Lady of Lourdes Hospital	49. Camden, New Jersey
50. Research Hospital and Medical Center	50. Kansas City, Missouri

The proposed time for the survey was February 15 to March 15, 1971. However, by March 10 only 78%, or 39 of the hospitals had responded. Therefore, a follow-up note was mailed to the remaining eleven hospitals which had not yet returned the questionnaire. This reminder contained the plea to respond as soon as possible to the survey questionnaire, if possible. By March 15, 1971 forty of the fifty hospitals had responded. On March 16, 1971, in order to complete the survey in the very near future, an additional fifteen hospitals were selected, and it was hoped that from this group at least eleven would answer. Decision was made that the first eleven would then be included in the survey. On March 22, 1971 the quota of fifty hospitals was reached.

From the information received via the survey questionnaire, the following items were given consideration:

1. <u>How many hospitals actually had a separate audiovisual department?</u>

The response to this question would give the researcher an insight into how many hospitals showed sufficient interest in audiovisual media to give this area the status of a separate hospital department.

2. <u>How many had a regular staff for this department?</u>

The information given on this question would actually be dependent upon the previous question, and would also give the researcher a clue as to the number of audiovisual positions in medical facilities possibly open to audiovisual graduates.

3. <u>How many hospitals had a definite allocation of funds and the amount thus specified?</u>

The answer to this question was also dependent on the two previous questions and was given to probe the area of financial interest, and give the researcher further light on hospital interest in this area.

4. <u>What was the general size range of hospitals surveyed?</u>

The size of a hospital is apt to control many factors in the functioning of a hospital, so it was of interest and importance that this item be considered.

5. <u>What types of hospitals were considered in the survey?</u>

As with size, the type of hospital is often a vital issue in determining the type of equipment a hospital uses.

6. <u>What types of training programs were conducted in these hospitals?</u>

Approved training programs make certain demands on a hospital and certain requirements must be fulfilled and maintained in order that a hospital meet the standards for continued training program approval. Thus, a close correlation could exist between efforts to maintain approval and means undertaken to secure this goal.

7. <u>What departments of the hospital made use of audiovisual equipment?</u>

This question was asked so that the researcher could judge whether only certain departments of a hospital utilize audiovisual equipment or whether the use is quite widespread.

8. What types of audiovisual equipment seemed to have the greatest popularity in the hospitals?

The seventeen items listed on the questionnaire were those selected for a combination of reasons. The researcher used her own past experience with audiovisual equipment as a basis for this selection, plus drawing upon information gained in previous audio-visual courses such as Instructional Technology. Hospitals were not limited to listing these seventeen categories, but could add any other type of equipment being used even though it was not specifically listed.

TREATMENT OF THE DATA

The data gleaned from the survey was used as a statistical basis from which certain conclusions regarding audiovisual media in hospitals were drawn. The items as reported by the 50 hospitals were believed to give a fairly representative cross-section standard of audiovisual media conditions existing in all the remaining hospitals in the United States.

All items were tabulated according to the survey questionnaire format which included name and address of hospital, type of hospital, hospital size, approved training programs, whether or not there was an organized audiovisual department and, if so, how many persons were employed and what amount of money was allocated in the budget, what were the various types of audiovisual equipment used and what specific departments in the hospital actually used the media. After the tabulation was completed, all figures were added and tables compiled.

In order to arrive at some meaningful statistical conclusions, and also to determine if there was any dependent relationship between the various items, the following tables were compiled: hospital size range, hospital type table, audiovisual equipment utilization table, audiovisual equipment popularity table, types and numbers of approved training programs conducted, areas and departments using audiovisual aids, analysis table of the 17 hospitals having separate audiovisual departments, showing the geographical areas, number of employees, number of training programs, number of audiovisual aids used, a table showing numerical relationship between number of training programs, size of hospital and number of audiovisual aids used, and a table showing the mean, mode and median of training programs, number of audiovisual media used and departments using these aids. Because of the nature of the data, no statistical formulas were applied other than several percentages were applicable. However, several items did lend themselves to the statistical maneuvers of the mean, the median and the mode.

HYPOTHESIS

In conducting a survey of this type, a general estimate would be that 30% of the hospitals responding to the questionnaire would have a definitely organized audiovisual department. This percentage would probably employ from one to ten persons in this department. Most likely all of the 50 hospitals surveyed would make use of some types of audiovisual hardware and software. The majority of the hospitals will also be involved in two or more officially approved educational programs of some type. The greater the number of these programs that do exist in a hospital, the greater is the likelihood of a more extensive usage of audiovisual media. The hospital survey will also reveal that a multitude of hospital departments, some of which not necessarily directly involved in formally approved training activities, make extensive use of audiovisual equipment. Presumably, the survey will also reflect a rather consistent relationship between hospital size and usage of audiovisual equipment. The researcher also predicts that the inventory of audiovisual equipment in federal, county, state and university hospitals will be greater than that found in the private hospitals.

CHAPTER IV

The information gathered from the 50 hospitals by means of letter and survey questionnaire is included in this chapter. A copy of the individualized reports as received from each hospital can be found in detailed form on page 88 to page 138 of the Appendix. As each questionnaire was received, it was analyzed carefully and specific results tabulated. When all 50 had been tabulated, a summation of each item was performed. In general, the questionnaire reports, as well as the tables constructed, revealed the size, type and location of the hospitals selected, as well as the number of hospitals that actually had special audiovisual departments, with specified personnel, and allocated funds. The reports also showed what types of equipment were utilized by each hospital, which types of equipment seemed to have a popular preference, and the number and types of approved training programs conducted, and how many and which specific departments of the hospital utilized the aids.

RESULTS OF THE STUDY

The 50 hospitals surveyed represented a total aggregate of 25,270 beds. The number of beds in the hospitals ranged from a low of 94 to a high of 1,750 beds. For the sake of classification, six bed range categories were used. These were: 50 to 100 beds; 101 to 200 beds; 201 to 300 beds; 301 to 400 beds; 401 to 500 beds, and lastly, all over 500 beds. Even though an attempt had been made by the researcher to include practically the same number of hospitals in the various bed number categories, the survey revealed that there was only one hospital in the 50 to 100 bed group; five hospitals in the 101 to 200 bed group; ten hospitals in the 201 to 300 bed division; nine hospitals in the 301 to 400 bed range; six hospitals in the 401 to 500 bed range category and 19 hospitals had a bed capacity of more than 500. See TABLE I on page 70 of the Appendix.

In order to classify the hospitals according to type, four types were listed on the questionnaire. These were: private, federal, county and university. However, in the survey questionnaire returns, three hospitals listed an additional category, thus classifying themselves as state, voluntary and non-profit organization respectively.

In tallying the questionnaire responses it was determined that by far the majority of the hospitals were classified as private, with a total of 32; seven were county hospitals; six were university hospitals; two were federal and the remaining three were listed as voluntary, state and a non-profit corporation. See TABLE II page 71 of the Appendix.

In the check-off questionnaire, 17 audiovisual aids were listed. However, option was given to add others not listed if they were in use in the hospital. In the final analysis, nine additional audiovisual equipment devices were listed. The five most popular aids were the slide projector with a total of 49 hospitals using it; secondly, the film projector was used by 48 hospitals; a similar total of 48 hospitals made use of blackboards; next was the tape recorder finding use in 45 hospitals, and fifth, the overhead projector used in 41 hospitals, with a total of 502 items of media in all 50 hospitals. Table 2 on page 50 shows at a glance the popularity rating for all audiovisual aids. See also Table IV-V on page 76 of the Appendix.

As far as approved training programs were concerned, the questio nnaire listed eight programs. In addition to these, space was allotted for any additional approved programs functioning in the hospital. Nineteen further programs were listed by hospitals, thus totaling 27 different types of programs. The four programs which were found most frequently were the Residency, found in 39 hospitals; the Internship in 36 hospitals; the School of Medical Technology in 35 hospitals and a School of Nursing in 35 hospitals. A complete listing is found in Table 3 on page 51.

In analyzing the 17 hospitals with organized audiovisual departments (see Table 4 page 52), there was a total of 69 employees, with the greatest number of employees in any one hospital being 21. This was in a private hospital in Baltimore, Maryland. The number of audiovisual media units in these ranged from six to 17, with a total of 203 or 39+% of all 502 units in the 50 hospitals. The number of training programs ranged from three to 11, with a total of 113 or 45% of the total of 250 programs in all 50 hospitals. Fourteen of these 17 hospitals used more than 10 audiovisual units. The geographical location of the 17 specific audiovisual departments were in the states of Colorado, Florida, Kentucky, Maryland, Minnesota, Missouri, Nebraska, New York, Ohio, Tennessee, three of the five analyzed in Texas, Utah, Washington, D.C., and both Wisconsin hospitals that were surveyed. These 17 departments were found in 10 private hospitals, four county and three university institutions. These figures were comparable since the majority of the 50 hospitals surveyed were private. According to hospital size, all with the exception of one, were at least over 300 beds.

After analyzing the 17 hospitals according to size, number of training programs and number of audiovisual media employed, there seemed no hard and fast relationship between size of hospital, number of training programs conducted and items of audiovisual equipment used. See Table 5 page 53 . The largest number of training programs, 11, existed in a 600 bed hospital which used 15 audiovisual media. Second, was a 1000 bed hospital which conducted 10 programs and used 10 audiovisual items. Two hospitals, one a 150 bed hospital and the other a 304 bed hospital had no training programs. Thirty-three hospitals were listed as having five or more programs. Of these, 23 used at least 10 or more media instruments. The largest number of audiovisual media was 17, in a 730 bed university hospital in Madison, Wisconsin.

Since the various types of departments in a hospital were almost too numerous to list, the researcher left this item on the questionnaire wide open for enumeration. The responses were varied and totaled 76 different departments. The five areas were listed most frequently as making use of audiovisual aids were: Inservice Education, as mentioned by 16 hospitals; Medical Staff which received a vote of 15; all departments and Radiology came next with a total of 14 hospitals and the fifth was Personnel, listed by 13 hospitals. A summarized listing can be found in TABLE III, page 72 of the Appendix.

Since there was too wide a variance in number in the various size and type of hospital categories, it was not deemed feasible or comparable to make any deductions regarding audiovisual media according to these classifications.

Three items in the questionnaire were considered adjustable to the use of the mean, median and mode and were thus employed. These three were the number of training programs in the 50 hospitals, the total number of audiovisual aids used and the number of departments using these aids. The results were as follows: The arithmetic mean for training programs was five, the median was five and the mode also was five. For the number of audiovisual aids used, the mean was 10+, the median was 10 and the mode was also 10. In totalling the number of departments using the audiovisual aids it was found that the mean number was five, the median was also five and the mode was one. See Table 6 on page 54.

Table 2

Audiovisual Equipment Popularity Range Table

Aid	Number of Hospitals
Slide Projector	49
Film Projector	48
Blackboards	48
Tape Recorder	45
Overhead Projector	41
Film-Strip Projector	36
Graphics, Models, Flip Charts	31
Opaque Projector	30
Patient Monitoring System	28
Computer - Data Processing	28
Closed Circuit Television	24
Video-Tape Equipment	23
Photography	21
Programmed Instruction	17
Flannel Boards	10
Teaching Machines	10
Loop Boards	5
Talking Book Machine, Sawyer Roto-Show, Motion Picture with Sound, Audio High Speed Duplicator, Lecternette, Phonograph, Lantern Slide, Electronic Projection Pointer, 2-Way Radio Conference (Total of 9)	1
Total 26 kinds	Total 502 Audiovisual Devices

Table 3

Approved Training Programs Conducted

Name of Program	Number of Hospitals
Residency	39
Internship	36
School of Medical Technology	35
School of Nursing	35
School of Radiologic Technology	34
Administrative Residency	27
School of Anesthesia	10
School of Medical Record Science	8
Chaplain Internship	4
Dietetic Internship	3
Physical Therapy Internship	2
Inhalation Therapy	2

One Each

Special Education Students	Psychiatric Technician
Medical Record Affiliation	Unit Clerk Training Program
Extern Program	Dental Hygienist Affiliation
Dietetic Residency	Social Work Affiliation
Histologic Technician	Corrective Therapist Affiliation
Radiologic Tech. (nuclear med)	Psychology Affiliation
Pharmacy Residents	Speech Pathology and Audiology Affiliation
Med. Tech. in Ophthalmology	
Total - 27 programs	Total - 250 in all hospitals

Table 4

Analysis of 17 Audiovisual Departments Showing Location Geographically, Size and Type of Hospital, Number of Audiovisual Employees, Number of Training Programs, Number of Audiovisual Units Used

Location	Size	Type	No. Employ.	No. Prog.	No. of A-V Media
1. Denver, Co.	311	County	3	4	13
2. Miami, Fl.	1204	County	1	8	6
3. Louisville, Ky.	363	County	6	3	9
4. Baltimore, Md.	1200	Private	21	8	13
5. St. Paul, Mn.	600	County	2	11	16
6. St. Louis, Mo.	374	Private	7	7	8
7. Omaha, Nb.	565	Private	5	7	14
8. New York, N.Y.	818	Private	1	5	10
9. Toledo, Oh.	609	Private	1	8	14
10. Memphis, Tn.	1500	Private	1	8	12
11. Dallas, Tx.	975	Private	3	7	14
12. Houston, Tx.	712	Private	--	6	10
13. San Antonio, Tx.	828	Private	5	9	14
14. Salt Lake City, Ut.	273	University	2	6	10
15. Washington, D.C.	396	University	11	5	11
16. Madison, Wi.	730	University	-	6	17
17. Milwaukee, Wi.	560	Private	-	5	12
		Total	69	113	203

Table 5

Correlation of Size of Hospital with
Number of Training Programs and Number of Audiovisual
Media Instruments Used

Size	Programs	Media	Size	Programs	Media	Size	Programs	Media
191	5	10	205	3	7	818	5	10
301	5	10	363	3	9	453	5	15
150	0	5	533	7	9	609	8	12
230	2	8	1200	8	13	1500	8	12
94	1	9	491	6	7	1750	3	10
227	7	10	413	5	9	975	7	14
325	8	10	444	6	9	122	0	2
304	0	12	600	11	15	712	6	10
294	4	6	415	6	9	828	9	14
400	1	12	440	6	11	273	6	10
311	4	13	511	7	10	396	5	11
1204	8	6	374	5	8	336	6	10
696	5	9	565	7	14	730	6	17
137	3	10	325	2	10	540	5	12
127	2	10	320	5	8			
339	2	12	250	3	10			
600	7	-	215	2	9			
614	7	11	1000	10	10			

Table 6

Mean, Median and Mode of Training Programs
Audiovisual Aids and Departments
Using Them

Item	Mean	Median	Mode
Training Programs in 50 hospitals	250 --- total 250 divided by 50 hospitals = <u>5</u> programs	11 7 5 3 0 10 7 5 3 0 9 7 5 3 8 6 5 3 8 6 5 2 8 6 5 2 8 6 5 2 8 6 5 2 7 6 5 2 7 6 4 1 7 6 4 1 7 5 3 0	5 occurs most fre-quently - 10 times
Number of audio-visual aids	502 - total aids 502 divided by 50 hospitals = 10+ aids	17 11 10 8 15 11 10 7 15 11 10 7 14 10 10 6 14 10 9 6 14 10 9 5 13 10 9 2 13 10 9 0 12 10 9 12 10 9 12 10 9 12 10 9 12 10 9 12 10 8 12 10 8	10 occurs most fre-quently - 15 times

(continued)

Mean, Median and Mode of Training Programs, Audiovisual Aids, and Departments Using Them

Item	Mean	Median	Mode
Departments using audio-visual aids	280 - total times department areas mentioned 280 divided by 50 hospitals = 5+ departments	31 6 3 1 19 6 3 1 15 6 3 1 12 6 3 0 11 6 3 0 11 6 3 0 10 5 2 0 10 9 5 2 9 4 1 8 4 1 8 4 1 8 4 1 7 3 1 7 7 7	1 occurs most frequently - 8 times

SUMMARY

Only one hospital was from the 50 to 100 bed range, five were from the 101 to 200 beds, nine from 301 to 400 beds, six from 401 to 500 beds and the remaining 19 had more than 500 beds. When classified according to type, 32 were private, two were federal, seven were county, six were university, and three classified themselves as either voluntary, state, or non-profit corporation. Seventeen hospitals or 34% of the total 50 hospitals surveyed had a specifically organized audiovisual department, with an aggregate of 69 persons employed. However, of the 17 hospitals which had a separate department, only four mentioned an allocation of funds and this amount totaled $123, 500. 00. All hospitals except one made mention of some use of audiovisual media and of the 49 which listed the various types, the five most popular aids were the slide projector, film projector, blackboards, tape recorder and overhead projector, in the preference as listed. Twenty-seven different categories of approved training programs were listed as being conducted in these 50 hospitals. Seventy-six different hospital departments were listed as making use of some type of audiovisual equipment in the formal or informal training programs.

CHAPTER V

RESOURCE AREAS FOR AUDIOVISUAL SOFTWEAR

All departments of a hospital are involved in some manner in a type of in-service training, for it involves employee education.

There are two principal steps required to develop and maintain productive employees and these are: 1) to bring the new employee up to a satisfactory performance level and, 2) to take action to keep him at that level and continue to develop his capabilities.[1]

It is becoming increasingly feasible to prepare audiovisual information so that it can be retrieved by the individual in modes ranging in sophistication from single individual slide sets used with hand viewers, to the computerized dial-access retrieval of videotape and motion picture film in individual study carrels.[2]

At long last we may be approaching a new era in which the audiovisual media may serve as a key resource in our struggle with disease.[3]

Almost as important as knowing the answer to a question or a problem is knowing where to find such an answer.

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[1] Addison Bennett, "Training for Improved Performance," Hospital Topics, May, 1969, p. 53.

[2] M. I. Romano, "Audiovisual Education Yesterday, Today and Tomorrow," Canadian Medical Association Journal, XCVIII (June, 1968), p. 1127-32.

[3] Ibid., p. 1127-32.

In-service education directors in hospitals are aware that a vast array of training materials is available in packaged slide, film, record, cassett, motion picture and video-tape form, but there is a need for a comprehensive catalog of such materials.

In order to furnish a practical value to this research paper for anyone interested in this topic, or in any way involved in any medical or paramedical educational program, the partial listing of available resource materials may prove useful. It is a listing of some of the software that can be used if the necessary hardware is available. It is by no means an exhaustive listing but will probably serve as a guideline for further research in this area. See page 150 of the Appendix.

CHAPTER VI

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

SUMMARY

The hospital survey included 50 hospitals located in divergent geographical areas of the United States. Responses revealed hospital size range from the smallest of 94 to the largest with 1,750 beds. According to type of control, each hospital was one of seven categories - private, county, university, federal, voluntary, state or non-profit corporation. The majority, 32, or 64% were private. A total of 26 different types of audiovisual media hardware were utilized in these hospitals with the highest number used in any one hospital being 17. Approved training programs totaled 27 with the greatest number in progress anywhere was 11. Seventy-six different hospital departments were listed as making use of some type of audiovisual equipment, with the Department of In Service Education being mentioned most frequently by the hospitals.

In the 17 hospitals that admitted to a separate audiovisual department, a total of 69 persons were employed, with the greatest number in a single hospital being 21, in a 1200 bed hospital. Only four hospitals mentioned definite allocation of funds for an audiovisual department budget with a total sum of $123,500.00. With the exception of one hospital, all those having separate audiovisual departments were over 300 beds and 12 of the 17 were over 500 beds. Fifteen of the 17 had five or more approved training programs and 14 of the 17 used more than 10 audiovisual units.

CONCLUSIONS

Judging from the responses to the questionnaire, it was obvious that, with the exception of one, all hospitals, regardless of size used from two to 17 types of audiovisual media. Some interest was displayed by the fact that 34% of the hospitals surveyed had given a separate status to the audiovisual department. A probable impetus in this direction may have been the fact that the majority of these hospitals had five or more training programs for which they were responsible.

Since 14 out of these 17 hospitals used more than 10 audiovisual media units, it can be concluded than an organized department with special personnel employed tends to raise the percentage of actual audiovisual media usage in an institution.

Since only four of the 17 audiovisual departments organized mentioned allocation of funds, conclusions were that either this is an area less organized, or the hospital was reluctant to reveal this item.

Organization of an audiovisual department, employment of special personnel and use of audiovisual media does not seem to be concentrated in any one geographical area since the survey revealed representations from all areas of the United States.

Even though 50 is only a small percentage of the total number of hospitals existing in the United States, the results obtained in the survey would probably apply to all hospitals in the United States and represent a fairly accurate statistical cross section of same.

RECOMMENDATIONS

Even though the researcher did compute the total number of items of audiovisual hardware that existed in the 50 hospitals surveyed, and the number and types of departments which made use of these, the figures do not really reflect the amount of usage in times or hours, nor is there any indication who in the department used the equipment. Hence, this remained as an area for further exploration.

Since a great number and variety of audiovisual aids do exist in hospitals, and the majority of these are in the 300-500 bed range, audiovisual media graduates, with a definite interest in medical facilities, could very well make further investigations and possibly recommend to administrators of such hospitals, that if a definite audiovisual department is not already in existence, that such be established and that competent personnel be employed to coordinate the equipment and services. All training programs functioning in the hospital would definitely be enhanced by an effective audiovisual center.

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APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX A

TABLE I

HOSPITAL SIZE RANGE ACCORDING TO BEDS

Number of Beds	Number of Hospitals
50 to 100	1
101 to 200	5
201 to 300	10
301 to 400	9
401 to 500	6
Over 500	19
Total	50

TABLE II

HOSPITAL TYPE

Type of Hospital	Number of Hospitals
Private	32
County	7
University	6
Federal	2
Voluntary	1
State	1
Non-profit corporation	1
Total	50

TABLE III

AREAS AND DEPARTMENTS USING AUDIOVISUAL AIDS

Name of Department	Number of hospitals	Name of Department	Number of hospitals
Inservice Education	16	Pathology	6
Medical Staff	15	Medical Education	6
All Departments	14	Department of Surgery	5
Radiology	14	Medical Records	5
Personnel	13	Dietary	5
Nursing	10	Volunteers	4
Nursing Service	9	Psychiatry	4
Administration	9	Public Relations	4
School of Nursing	8	Intern Program	4
Housekeeping	8	Outpatient Clinic	3
Laboratory	7	Pediatrics	3

(Continued)

TABLE III

AREAS AND DEPARTMENTS USING AUDIOVISUAL AIDS

Name of Department	Number of hospitals	Name of Department	Number of hospitals
Neurology ----	3	Outpatient Therapy ----	2
Laundry ----	3	Licensed Practical Nurse Training	2
Inhalation Therapy ----	3	Respiratory Therapy ----	2
Cardiology ----	3	Research Laboratories ----	2
Medical Technology ----	3	Rehabilitation ----	2
Obstetrics and Gynecology	3	Coronary Care ----	2
Medical Library ----	2	Hospital Auxiliary ----	2
Department of Medicine -	2	Maintenance ----	1
Pharmacy ----	2	Biomedical ----	1
Central Supply ----	2	EEG Dept. ----	1
Social Service ----	2	EKG Dept. ----	1

(Continued)

TABLE III

AREAS AND DEPARTMENTS USING AUDIOVISUAL AIDS

Name of Department	Number of hospitals	Name of Departments	Number of hospitals
Clinical Psychology	1	C. P. R. Training	1
Patient Teaching	1	Physical Medicine	1
Management-Supervisors	1	Credit Union	1
Medical Photography	1	Radiotherapy	1
Nuclear Medicine	1	Anesthesiology	1
Physical Therapy	1	Home Dialysis	1
Speech Pathology and Audiology	1	Ear, Nose, Throat Dept.	1
Physical Medicine	1	Dietetics	1
Hospital Services	1	Ambulatory Treatment Center	1
Guest Speakers	1	Medical Professional Services	1
Orthopedic Residents	1	Engineering	1

(Continued)

TABLE III

AREAS AND DEPARTMENTS USING AUDIOVISUAL AIDS

Name of Department		Number of hospitals	Name of Departments	Number of hospitals
Security	----	1		
Orthopedics	----	1		
Residents	----	1		
Fellows	----	1		
Business Office	----	1		
PBX	----	1		
Information Processing	----	1		
Reception Training	----	1		
Safety Committee	----	1		
Infection Control	----	1		

TABLE IV Part 1

NON-ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of hospital	Programmed Instruct.	Photography	Black Board	Flannel Board	Graphics, Models, Flips	Loop Boards
1. St. Joseph Hospital Houston, Texas		X	X			
2. Mobile General Hospital Mobile, Alabama			X			
3. Barnert Memorial Hosp. Center Paterson, New Jersey			X		X	
4. Arkansas Children's Hosp. Little Rock, Arkansas			X	X		
5. U. of Wis. Hospitals Madison, Wisconsin			X	X	X	X
6. St. Vincent's Hospital Birmingham, Alabama			X			
7. Indiana Univ. Hospital Indianapolis, Indiana						
8. California Hosp. Med. Center Los Angeles, California			X		X	
9. Tucson General Hospital Tucson, Arizona			X			
10. Kaiser-Permanente Med. Center San Francisco, California			X			

(continued)

TABLE IV Part 2

NON-ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of hospital	Programmed Instruct.	Photo-graphy	Black Board	Flannel Board	Graphics, Models, Flips	Loop Boards
11. Louisville Gen. Hospital Louisville, Kentucky			X			
12. St. Luke's Hospital Duluth, Minnesota			X			
13. Herrick Memorial Hospital Berkeley, California			X			
14. Santa Rosa Medical Center San Antonio, Texas			X		X	
15. De Paul Hospital St. Louis, Missouri			X	X	X	
16. Jackson Memorial Hospital Miami, Florida			X			
17. Providence Hospital Seattle, Washington		X	X			
18. Ramsey Hospital-Med. Center St. Paul, Minnesota	X	X	X	X	X	
19. University Hospital Jackson, Mississippi	X	X	X			
20. Iowa Methodist Hospital Des Moines, Iowa			X	X	X	X

(continued)

TABLE IV Part 3

NON-ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of hospital	Programmed Instruct.	Photo-graphy	Black Boards	Flannel Board	Graphics, Models, Flips	Loop Boards
21. Providence Hospital Anchorage, Alaska			X			
22. St. Vincent Hospital-Center Toledo, Ohio		X	X	X	X	X
23. Austin State Hospital Austin, Texas	X	X	X		X	
24. Georgetown Univ. Hospital Washington, D.C.		X	X		X	
25. University Hospital Salt Lake City, Utah		X	X			
26. Providence Hospital Kansas City, Kansas			X			
27. St. Joseph Hospital Flint, Michigan	X		X			
28. Touro Infirmary New Orleans, Louisiana			X	X	X	
29. Veterans' Administration Hosp. San Francisco, California		X	X	X	X	
30. Grant Hospital of Columbus Columbus, Ohio	X	X	X	X	X	
31. Denver General Hospital Denver, Colorado		X	X		X	

(continued)

TABLE IV Part 4

NON-ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of hospital	Programmed Instruct.	Photo-graphy	Black Boards	Flannel Board	Graphics, Models, Flips	Loop Boards
32. Veterans Adm. Hosp. Brooklyn, New York	X	X	X		X	
33. St. Joseph's Hospital Milwaukee, Wisconsin		X	X	X	X	
34. Sam Houston Memorial Hosp. Houston, Texas			X			
35. Creighton Memorial Hosp. Omaha, Nebraska	X		X		X	
36. St. Vincent's Hospital New York, New York	X		X			
37. St. Vincent's Hospital Los Angeles, California			X		X	
38. Baptist Memorial Hospital Memphis, Tennessee		X	X		X	
39. Bannock Memorial Hospital Pocatello, Idaho			X		X	
40. John Hopkins Univ. Hospital Baltimore, Maryland		X			X	X
41. Baylor U. Medical Center Dallas, Texas	X	X	X		X	

(continued)

TABLE IV Part 5

NON-ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of hospital	Programmed Instruct.	Photo-graphy	Black Board	Flannel Board	Graphics, Models, Flips	Loop Boards
42. St. Elizabeth Hosp. of Boston Brighton, Massachusetts			X			
43. Sunrise Hospital Las Vegas, Nevada	X		X			
44. Grant Hospital Chicago, Illinois	X		X		X	
45. Magic Valley Memorial Hosp. Twin Falls, Idaho	X		X		X	
46. St. Vincent Hospital Santa Fe, Mexico	X		X		X	
47. University Hospital Augusta, Georgia			X		X	
48. Miss. Baptist Hospital Jackson, Mississippi			X			
49. Our Lady of Lourdes Hosp. Camden, New Jersey			X		X	
50. Research Hosp. and Med. Cen. Kansas City, Missouri			X		X	

TABLE V Part 1

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir. T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
1. St. Joseph's Hospital Houston, Texas	X	X	X	X	X	X	X			X		
2. Mobile Gen. Hospital Mobile, Alabama	X	X		X	X	X	X		X	X	X	
3. Barnert Mem. Hosp. Cen. Paterson, New Jersey	X	X	X		X			X	X		X	
4. Arkansas Children's Hosp. Little Rock, Arkansas	X	X			X	X			X			X
5. University of Wis. Hosp. Madison, Wisconsin	X	X	X	X	X	X	X	X	X	X	X	
6. St. Vincent's Hospital Birmingham, Alabama	X	X	X	X	X				X		X	
7. Indiana Univ. Hospital Indianapolis, Indiana												
8. California Hosp. Med. Cen. Los Angeles, California	X	X	X	X	X	X	X		X	X		

(continued)

TABLE V Part 2

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir. T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
9. Tucson General Hospital Tucson, Arizona	X	X		X	X		X		X		X	
10. Kaiser-Permanente Med. Cen. San Francisco, California	X		X		X					X	X	
11. Louisville General Hospital Louisville, Kentucky	X		X	X	X	X	X			X		
12. St. Luke's Hospital Duluth, Minnesota	X	X			X	X	X		X		X	
13. Herrick Memorial Hosp. Berkeley, California	X	X		X	X	X	X		X			XX
14. Santa Rosa Medical Center San Antonio, Texas	X	X	X	X	X	X	X		X	X	X	
15. De Paul Hospital St. Louis, Missouri	X	X		X	X					X		
16. Jackson Memorial Hosp. Miami, Florida	X	X		X	X		X					

(continued)

TABLE V Part 3

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
17. Ramsey Hospital - Med. Cent. St. Paul, Minnesota	X	X	X	X	X	X	X		X	X	X	X X
18. Providence Hospital Seattle, Washington	X	X	X	X	X	X	X			X		
19. University Hospital Jackson, Mississippi	X	X	X	X	X	X	X				X	
20. Iowa Methodist Hospital Des Moines, Iowa	X		X	X	X	X			X		X	
21. Providence Hospital Anchorage, Alaska	X	X			X				X			
22. St. Vincent Hosp.-Center Toledo, Ohio	X	X	X	X	X		X			X	X	X
23. Austin State Hospital Austin, Texas	X	X	X	X	X					X	X	
24. Georgetown University Hosp. Washington, D.C.	X	X	X	X	X		X	X		X		

(continued)

TABLE V Part 4

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir. T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
25. University Hospital Salt Lake City, Utah	X	X	X	X	X	X		X		X		
26. Providence Hospital Kansas City, Kansas	X	X		X	X	X	X					
27. St. Joseph Hospital Flint, Michigan	X	X		X	X	X			X		X	
28. Touro Infirmary New Orleans, Louisiana	X	X		X	X		X				X	
29. Veterans Admin. San Francisco, California	X	X		X	X	X	X	X	X			
30. Grant Hosp. of Columbus Columbus, Ohio	X	X	X	X	X		X	X	X	X	X	
31. Denver Gen. Hospital Denver, Colorado	X	X	X	X	X	X	X		X	X	X	
32. Veterans Adm. Hosp. Brooklyn, New York	X	X		X	X		X		X			

(continued)

TABLE V Part 5

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir. T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
33. St. Joseph's Hospital Milwaukee, Wisconsin	X	X	X	X	X	X	X				X	
34. Sam Houston Mem. Hosp. Houston, Texas					X							
35. Creighton Mem. Hosp. Omaha, Nebraska	X	X	X	X	X	X	X		X	X	X	XXX
36. St. Vincent's Hosp. New York, New York	X	X	X	X	X	X	X	X				
37. St. Vincent's Hospital Los Angeles, California	X	X	X	X	X	X	X		X	X	X	
38. Baptist Memorial Hosp. Memphis, Tennessee	X	X	X	X	X	X	X		X	X	X	
39. Bannock Mem. Hosp. Pocatello, Idaho	X	X		X	X		X		X	X	X	
40. John Hopkins Univ. Hosp. Baltimore, Maryland	X	X		X	X	X	X			X		XXX

(continued)

TABLE V Part 6

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir. T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
41. Baylor U. Med. Center Dallas, Texas	X	X	X	X	X	X	X		X	X	X	
42. St. Elizabeth Hosp. of Bos. Brighton, Massachusetts	X	X		X	X	X						X
43. Sunrise Hospital Las Vegas, Nevada	X	X		X		X	X			X	X	
44. Grant Hospital Chicago, Illinois	X	X			X	X	X	X	X	X	X	
45. Magic Valley Mem. Hosp. Twin Falls, Idaho	X	X		X	X		X		X			X
46. St. Vincent Hospital Santa Fe, Mexico	X	X		X	X	X	X					
47. University Hospital Augusta, Georgia	X	X		X	X		X		X		X	
48. Mississippi Baptist Hosp. Jackson, Mississippi	X	X		X	X	X			X		X	X

(continued)

TABLE V Part 7

ELECTRONIC AUDIOVISUAL EQUIPMENT UTILIZATION

Name of Hospital	Film Proj.	Tape Record.	Closed cir. T-V	Overhead Projector	Slide Proj.	Opaque Projector	Film Strip Projector	Teaching Machine	Patient Monitoring System	Video Tape	Computer - Data Process.	Other
49. Our Lady of Lourdes Hosp. Camden, New Jersey	X	X		X	X		X		X			
50. Research Hosp. & Med. Center Kansas City, Missouri	X	X		X	X	X	X	X			X	

APPENDIX B

TABLE VI

HOSPITAL QUESTIONNAIRE RESULTS

ALABAMA, Birmingham

NAME AND ADDRESS OF HOSPITAL:	St. Vincent's Hospital 2701 Ninth Court So. Birmingham, Alabama 35201
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	191 beds; 33 bassinets
APPROVED TRAINING PROGRAMS	Internship School of Nursing School of Medical Technology Administrative Residency Medical Record Course- (affiliation with nearby junior college)
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit T-V Overhead projector Slide projector Programmed instruction Blackboards Graphics, Models, Flip Charts Patient Monitoring System Computer - Data Processing Equipment
DEPARTMENTS USING EQUIPMENT:	School of Nursing Internship Program Medical Staff Education Inservice Education Nursing Service School of Medical Technology

TABLE VII

HOSPITAL QUESTIONNAIRE RESULTS

ALABAMA, Mobile

NAME AND ADDRESS OF HOSPITAL:	Mobile General Hospital 2451 Fillingim St. Mobile, Alabama
TYPE OF HOSPITAL:	University
BEDS AND BASSINETS:	301 beds; 60 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Opaque projector Blackboards Film strip projector Patient Monitoring system Video-tape equipment Computer - Data processing equipment
DEPARTMENTS USING EQUIPMENT:	Not mentioned

TABLE VIII

HOSPITAL QUESTIONNAIRE RESULTS

ALASKA, Anchorage

NAME AND ADDRESS OF HOSPITAL:	Providence Hospital 3200 Providence Drive Anchorage, Alaska 99504
TYPE OF HOSPITAL:	General, non-profit, private
BEDS AND BASSINETS:	150 beds
APPROVED TRAINING PROGRAMS:	None
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Slide projector Blackboards Patient Monitoring System
DEPARTMENTS USING EQUIPMENT:	Nursing Service All departments for inservice education

TABLE IX

HOSPITAL QUESTIONNAIRE RESULTS

ARIZONA, Tucson

NAME AND ADDRESS OF HOSPITAL:	Tucson General Hospital 3838 N. Campbell Tucson, Arizona 85719
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	230 beds; 12 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Film strip projector Patient monitoring system Computer - Data Processing
DEPARTMENTS USING EQUIPMENT:	Intern training Nursing orientation and training C.P.R. training

TABLE X

HOSPITAL QUESTIONNAIRE RESULTS

ARKANSAS, Little Rock

NAME AND ADDRESS OF HOSPITAL:	Arkansas Children's Hosp. 804 Wolfe Street Little Rock, Arkansas 72201
TYPE OF HOSPITAL:	Private, non-profit
BEDS AND BASSINETS:	94 beds; 3 isolettes
APPROVED TRAINING PROGRAMS:	Graduate and undergrad. students come for practice teaching. Program is in conjunction with State College of Arkansas - Conway, Arkansas.
ORGANIZED A-V DEPARTMENT :	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Slide projector Opaque projector Blackboards Flannel boards Graphics, models, flips Patient monitoring system Talking book machine
DEPARTMENTS USING EQUIPMENT:	Public relations Board of trustees Nursing. Orth. residents Hospital auxiliary Guest speakers Medical technology

TABLE XI

HOSPITAL QUESTIONNAIRE RESULTS

CALIFORNIA, Berkeley

NAME AND ADDRESS OF HOSPITAL:	Herrick Memorial Hosp. 2001 Dwight Way Berkeley, California 94704
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	227 beds
APPROVED TRAINING PROGRAMS:	Internship Administrative Residency Internships, various -- dietitians, physical therapy, pastoral training Radiologic technology
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Opaque projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system Physiological tutor
DEPARTMENTS USING EQUIPMENT:	Nursing service education Medical education Psychiatry Personnel Volunteers

TABLE XII

HOSPITAL QUESTIONNAIRE RESULTS

CALIFORNIA, Los Angeles

NAME AND ADDRESS OF HOSPITAL:	California Hosp. Med. Ctr. 1414 S. Hope St. Los Angeles, Calif. 90015
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	325 beds; 30 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiolog. Tech. School of Med. Tech. Administrative Residency Extern Program Chaplain's internship
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit T-V Overhead projector Opaque projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system Video-tape equipment
DEPARTMENTS USING EQUIPMENT:	None mentioned

TABLE XIII

HOSPITAL QUESTIONNAIRE RESULTS

CALIFORNIA , Los Angeles

NAME AND ADDRESS OF HOSPITAL:	St. Vincent's Hospital 2131 W. 3rd St. Los Angeles, California 90057
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	304 beds
APPROVED TRAINING PROGRAMS:	None mentioned
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Opaque projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system Video-tape equipment Computer - data processing
DEPARTMENTS USING EQUIPMENT:	None mentioned

TABLE XIV

HOSPITAL QUESTIONNAIRE RESULTS

CALIFORNIA, San Francisco

NAME AND ADDRESS OF HOSPITAL:	Kaiser-Permanente Med. C. 2425 Geary Blvd. San Francisco, Calif. 94115
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	294 beds; 35 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Med. Technology Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Closed circuit TV Slide projector Blackboards Video-tape equipment Computer - data processing
DEPARTMENTS USING EQUIPMENT:	Personnel Department Nursing In-Service Reception Training Physician Orientation

TABLE XV

HOSPITAL QUESTIONNAIRE RESULTS

CALIFORNIA, San Francisco

NAME AND ADDRESS OF HOSPITAL:	Veterans Hospital 4150 Clement Street San Francisco, Calif. 94121
TYPE OF HOSPITAL:	Federal
BEDS AND BASSINETS	400 beds
APPROVED TRAINING PROGRAMS:	Residency - affiliated with U. of California
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Opaque projector Photography Med. illustration service Blackboards Film strip projector Flannel boards Teaching machines Graphics, models, flips Patient monitoring system
DEPARTMENTS USING EQUIPMENT:	All professional services Personnel and engineering divisions

TABLE XVI

HOSPITAL QUESTIONNAIRE RESULTS

COLORADO, Denver

NAME AND ADDRESS OF HOSPITAL:	Denver General Hospital W. 8th Avenue at Cherokee Denver, Colorado 80206
TYPE OF HOSPITAL:	County
BEDS AND BASSINETS:	311 beds; 46 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Radiologic Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	3

TYPES OF A-V EQUIPMENT USED:

Film projector	Blackboards
Tape recorder	Film strip projector
Closed circumit TV	Graphics, models, flip charts
Overhead projector	Patient monitoring system
Slide projector	Video-tape equipment
Opaque projector	Computer - data processing equipm.
Photography dept.	

DEPARTMENTS USING EQUIPMENT:	All departments Nursing Medical education Ambul. care service Patient education Staff training -orientation Public health depts. In-patient care services

TABLE XVII

HOSPITAL QUESTIONNAIRE RESULTS

FLORIDA, Miami

NAME AND ADDRESS OF HOSPITAL:	Jackson Memorial Hosp. 1700 N.W. 10 Avenue Miami, Florida 33136
TYPE OF HOSPITAL:	County
BEDS AND BASSINETS:	1,204 beds; 72 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Rad. Tech. School of Med. Tech. Administrative Residency 4-yr. nursing program 2-yr. affil. nursing program
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	One
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Film strip projector
DEPARTMENTS USING EQUIPMENT:	Above listed training prog. Academic education program Practical nurse program Management supervisory training

TABLE XVIII

HOSPITAL QUESTIONNAIRE RESULTS

GEORGIA, Augusta

NAME AND ADDRESS OF HOSPITAL:	University Hospital 1350 Walton Way Augusta, Georgia 30904
TYPE OF HOSPITAL:	County- City
BEDS AND BASSINETS:	696 beds; 44 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Anesthesia School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system Computer - data processing
DEPARTMENTS USING EQUIPMENT:	Inservice education Medical education Inhalation therapy X-ray department Infections control

TABLE XIX

HOSPITAL QUESTIONNAIRE RESULTS

IDAHO, Pocatello

NAME AND ADDRESS OF HOSPITAL:	Bannock Memorial Hosp. Memorial Drive Pocatello, Idaho 83201
TYPE OF HOSPITAL:	County
BEDS AND BASSINETS:	137 beds; 35 bassinets
APPROVED TRAINING PROGRAMS:	School of Radiologic Tech. School of Med. Tech. Clinical for nursing prog. Clinical for LPN
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system Video-tape equipment Computer- data processing
DEPARTMENTS USING EQUIPMENT:	All departments through inservice education department

TABLE XX

HOSPITAL QUESTIONNAIRE RESULTS

IDAHO, Twin Falls

NAME AND ADDRESS OF HOSPITAL:	Magic Valley Memorial Hosp. 650 Addison Ave. W. Twin Falls, Idaho 83301
TYPE OF HOSPITAL:	County
BEDS AND BASSINETS:	127 beds; 22 bassinets
APPROVED TRAINING PROGRAMS:	School of Nursing School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Programmed instruction Blackboards Film strip projector Graphics, models, flips Patient monitoring system Two-way radio conference
DEPARTMENTS USING EQUIPMENT:	Nursing Radiology Pathology Medical Records Dietary Housekeeping Volunteers

TABLE XXI

HOSPITAL QUESTIONNAIRE RESULTS

ILLINOIS, Chicago

NAME AND ADDRESS OF HOSPITAL:	Grant Hospital 551 W. Grant Place Chicago, Illinois 60614
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	339 beds; 32 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Slide projector Programmed instruction Opaque projector Blackboards Film strip projector Teaching machines Graphics, models, flips Patient monitoring system Video-tape equipment Computer - data processing
DEPARTMENTS USING EQUIPMENT:	Used in all teaching programs

TABLE XXII

HOSPITAL QUESTIONNAIRE RESULTS

INDIANA, Indianapolis

NAME AND ADDRESS OF HOSPITAL:	Indiana University 1100 W. Michigan St. Indianapolis, Ind. 46202
TYPE OF HOSPITAL:	University
BEDS AND BASSINETS:	600 beds; 42 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. School of Med. Record Sc. Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Not mentioned
DEPARTMENTS USING EQUIPMENT:	Not mentioned

TABLE XXIII

HOSPITAL QUESTIONNAIRE RESULTS

IOWA, Des Moines

NAME AND ADDRESS OF HOSPITAL:	Iowa Methodist Hospital 1200 Pleasant St. Des Moines, Iowa 50308
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	614 beds
APPROVED TRAINING PGORAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. Administrative Residency Chaplain Internship
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Closed circuit TV Overhead projector Slide projector Opaque projector Blackboards Flannel boards Graphics, models, flips Loop boards Patient monitoring system Computer - data processing
DEPARTMENTS USING EQUIPMENT:	None mentioned

TABLE XXIV

HOSPITAL QUESTIONNAIRE RESULTS

KANSAS , Kansas City

NAME AND ADDRESS OF HOSPITAL:	Providence Hospital 1818 Tauromee Avenue Kansas City, Kansas 66102
TYPE OF HOSPITAL:	Private, non-profit
BEDS AND BASSINETS:	205 beds; 30 bassinets
APPROVED TRAINING PROGRAMS:	School of Nursing School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Photography dept. Blackboards Film strip projector
DEPARTMENTS USING EQUIPMENT:	Nursing Service Laboratory Radiology General Employee Programs Medical Staff Personnel Department Continuing Education Dept.

TABLE XXV

HOSPITAL QUESTIONNAIRE RESULTS

KENTUCKY, Louisville

NAME AND ADDRESS OF HOSPITAL:	Louisville General Hosp. 323 E. Chestnut St. Louisville, Kentucky 40202
TYPE OF HOSPITAL:	City-County
BEDS AND BASSINETS:	363 beds; 54 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Radiologic Tech.
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED	6
TYPES OF A-V EQUIPMENT USED:	Film projector Closed circuit TV Overhead projector Slide projector Opaque projector Photography Blackboards Film strip projector Video-tape equipment
DEPARTMENTS USING EQUIPMENT:	Dept. of surgery Dept. of medicine Radiology Neurology OB-Gyn. Pathology

TABLE XXVI

HOSPITAL QUESTIONNAIRE RESULTS

LOUISIANA, New Orleans

NAME AND ADDRESS OF HOSPITAL:	Touro Infirmary 1400 Foucher Street New Orleans, La. 70115
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	533 beds
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. Administrative Residency Dietetic internship
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Film strip projector Flannel boards Graphics, models, flips Computer - data processing
DEPARTMENTS USING EQUIPMENT:	Nursing Professional education Personnel Dietetics Pathology Radiology Ambulatory treatment ca. Housekeeping

TABLE XXVII

HOSPITAL QUESTIONNAIRE RESULTS

MARYLAND, Baltimore

NAME AND ADDRESS OF HOSPITAL:	Johns Hopkins U. Hosp. 1721 E. Madison St. Baltimore, Maryland 21205
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	1,200 beds
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia School of Radiologic Tech. School of Medical Tech. School of Med. Rec. Sc. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	21
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Opaque projector Photography dept. Film strip projector Graphics, models, flips Loop boards Video-tape equipment Audio high speed duplicator Lecternette Phonographs
DEPARTMENTS USING EQUIPMENT:	Numerous departments

TABLE XXVIII

HOSPITAL QUESTIONNAIRE RESULTS

MASSACHUSETTS, Brighton

NAME AND ADDRESS OF HOSPITAL:	St. Elizabeth's Hospital of Boston Brighton, Mass. 02135
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	491 beds; 60 beds
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Opaque projector Blackboards Electric projection pointer
DEPARTMENTS USING EQUIPMENT:	School of Nursing Research Department Public Relations Medical Education In-Service Education Cardiology Clinical Lab.

TABLE XXIX

HOSPITAL QUESTIONNAIRE RESULTS

MICHIGAN, Flint

NAME AND ADDRESS OF HOSPITAL:	St. Joseph Hospital 302 Kensington Flint, Michigan 48502
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	413 beds; 65 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Programmed instruction Opaque projector Blackboards Patient monitoring system Computer - data processing
DEPARTMENTS USING EQUIPMENT:	Medical education Nursing Service

TABLE XXX

HOSPITAL QUESTIONNAIRE RESULTS

MINNESOTA , Duluth

NAME AND ADDRESS OF HOSPITAL:	St. Luke's Hospital Duluth, Minnesota
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	444 beds; 30 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Slide projector Opaque projector Photography dept. Blackboards Film strip projector Patient monitoring system Computer- data processing
DEPARTMENTS USING EQUIPMENT:	Practically every department uses some of this equipment at one time or another

TABLE XXXI

HOSPITAL QUESTIONNAIRE RESULTS

MINNESOTA, St. Paul

NAME AND ADDRESS OF HOSPITAL:	St. Paul Ramsey Hosp. 640 Jackson St. St. Paul, Minn. 55101
TYPE OF HOSPITAL:	County
BEDS AND BASSINETS:	600 beds; 34 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia Radiologic Technology School of Medical Tech. Administrative Residency Pharmacy Residents Dietary interns Chaplaincy
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	2

TYPES OF A-V EQUIPMENT USED:

Film projector	Film strip projector
Tape recorder	Flannel boards
Closed circuit TV	Graphics, models, flip charts
Overhead projector	Patient monitoring system
Slide projector	Video-tape equipment
Programmed instruction	Computer - data processing equip.
Opaque projector	Portable roto-show
Photography	
Blackboards	

DEPARTMENTS USING EQUIPMENT: All education areas

CSR children playroom	Housekeeping
Social service	Administration
Psych . pt. areas	Laundry
O. T.	In-service education

TABLE XXXII

HOSPITAL QUESTIONNAIRE RESULTS

MISSISSIPPI, Jackson

NAME AND ADDRESS OF HOSPITAL:	Mississippi Baptist Hosp. 1190 North State St. Jackson, Mississippi 39201
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	415 beds; 31 bassinets
APPROVED TRAINING PROGRAMS:	Internship School of Nursing School of Radiologic Tech. School of Medical Tech. Licensed Practical Nurse Inhalation Therapy
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape projector Overhead projector Slide projector Opaque projector Blackboards Patient monitoring system Computer - data processing Lantern slide projector
DEPARTMENTS USING EQUIPMENT:	Inservice education Nursing service Inhalation therapy Intern program Medical staff X-ray Lab.

TABLE XXXIII

HOSPITAL QUESTIONNAIRE RESULTS

MISSISSIPPI, Jackson

NAME AND ADDRESS OF HOSPITAL:	University Hospitals 2500 North State St. Jackson, Mississippi 39216
TYPE OF HOSPITAL:	University
BEDS AND BASSINETS:	440 beds; 36 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Radiologic Tech. School of Medical Tech. Medical Record Sc. School Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Programmed instruction Opaque projector Photography Blackboards Film strip projector Computer - data processing
DEPARTMENTS USING EQUIPMENT:	A-V equipment available to all departments through AV pool. Closed circuit TV under direction of Dept. of Psychiatry

TABLE XXXIV

HOSPITAL QUESTIONNAIRE RESULTS

MISSOURI, Kansas City

NAME AND ADDRESS OF HOSPITAL:	Research Hospital and Medical Center Meyer Blvd. at Prospect Kansas City, Mo. 64132
TYPE OF HOSPITAL:	Non-profit corporation
BEDS AND BASSINETS:	511 beds; 6 bassinets
APPROVED TRAINING PROGRAMS:	Residency School of Nursing School of Radiologic Tech. School of Medical Tech. School of Med. Rec. Sc. Administrative Residency LPN training program
ORGANIZED A-V Department:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Opaque projector Blackboards Film strip projector Teaching machines Graphis, models, flips Computer - Data processing
DEPARTMENTS USING EQUIPMENT:	All departments - especially Pt. care in-service training Personnel Management Development School of Nursing - LPN School of Medical Tech.

TABLE XXXV

HOSPITAL QUESTIONNAIRE RESULTS

MISSOURI, St. Louis

NAME AND ADDRESS OF HOSPITAL:	De Paul Hospital 2415 North Kingshighway St. Louis, Mo. 63113
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	374 beds; 20 bassinets
APPROVED TRAINING PROGRAMS:	Pathology Residency School of Nursing School of Radiologic Tech. School of Medical Tech. Administrative Residency Clinical facilities for several programs
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED: 7	BUDGET: Approx. $6,500 for general expenses
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Flannel boards Graphics, models, flips Video-tape equipment
DEPARTMENTS USING EQUIPMENT:	Any department can use Most usage - Dept. of Nursing. Also - general employee orientation and continuing education.

TABLE XXXVI

HOSPITAL QUESTIONNAIRE RESULTS

NEBRASKA, Omaha

NAME AND ADDRESS OF HOSPITAL:	Creighton Memorial Hosp. St. Joseph's Hospital 2305 S. 10th St. Omaha, Nebraska 68108
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	565 beds; 26 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia School of Radiologic Tech. School of Medical Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED :	5 - 3 full-time; 2 p.t.
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Programmed instruction Opaque projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system Video-tape equipment Computer - data processing
DEPARTMENTS USING EQUIPMENT:	By all departments of the hospital with rare exception.

TABLE XXXVII

HOSPITAL QUESTIONNAIRE RESULTS

NEVADA, Las Vegas

NAME AND ADDRESS OF HOSPITAL:	Sunrise Hospital 3186 M aryland Parkway Las Vegas, Nevada
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	325 beds; 31 bassinets
APPROVED TRAINING PROGRAMS:	School of Nursing School of Radiologic Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Programmed instruction Opaque projector Blackboards Film strip projector Video-tape equipment Computer- data processing
DEPARTMENTS USING EQUIPMENT:	None mentioned

TABLE XXXVIII

HOSPITAL QUESTIONNAIRE RESULTS

NEW JERSEY, Camden

NAME AND ADDRESS OF HOSPITAL:	Our Lady of Lourdes Hosp. 1600 Haddon Avenue Camden, New Jersey 08103
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	320 beds; 60 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Blackboards Film strip projector Graphics, models, flips Patient monitoring system
DEPARTMENTS USING EQUIPMENT:	School of Nursing Coronary care unit Nursing service Medical staff

TABLE XXXIX

HOSPITAL QUESTIONNAIRE RESULTS

NEW JERSEY, Patterson

NAME AND ADDRESS OF HOSPITAL:	Barnert Memorial Hosp. 680 Broadway Patterson, New Jersey 07514
TYPE OF HOSPITAL:	Voluntary
BEDS AND BASSINETS:	250 beds; 30 bassinets
APPROVED TRAINING PROGRAMS:	Residency School of Med. Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Slide projector Programmed instruction Blackboards Teaching machines Graphics, models, flips Patient monitoring system Computer- data processing
DEPARTMENTS USING EQUIPMENT:	Nursing Administration X-ray Lab. Personnel All other departments as training requires

TABLE XL

HOSPITAL QUESTIONNAIRE RESULTS

NEW MEXICO, Santa Fe

NAME AND ADDRESS OF HOSPITAL:	St. Vincent Hospital Palace Ave. Santa Fe, New Mexico 87501
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	215 beds; 20 bassinets
APPROVED TRAINING PGORAMS:	School of LPN School of Radiologic Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Programmed instruction Opaque projector Blackboards Film strip projector Graphics, models, flips
DEPARTMENTS USING EQUIPMENT:	School of LPN Inservice Education Coronary care unit All nursing units Medical staff X-ray Dietary Housekeeping Safety committee

TABLE XLI

HOSPITAL QUESTIONNAIRE RESULTS

NEW YORK, Brooklyn

NAME AND ADDRESS OF HOSPITAL:	Veterans Administ. Hosp. 800 Poly Place Brooklyn, N. Y. 11209
TYPE OF HOSPITAL:	Federal
BEDS AND BASSINETS:	1000 beds
APPROVED TRAINING PROGRAMS:	Residency Internship School of Med. Tech. Affiliation in Nursing Dental Hygienist Corrective Therapist Physical Therapist Psychology Social work Speech Path. & Audiology
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Overhead projector Slide projector Programmed instruction Photography Blackboards Film strip projector Graphics, models, flips Patient monitoring service
DEPARTMENTS USING EQUIPMENT:	Medical professional services Nursing service Speech pathology and audiology

TABLE XLII

HOSPITAL QUESTIONNAIRE RESULTS

NEW YORK, New York

NAME AND ADDRESS OF HOSPITAL:	St. Vincent's Hospital 153 West 11th St. New York, N. Y. 10011
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	818 beds; 49 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of nursing School of Med. Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED	1
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Programmed instruction Opaque projector Blackboards Film strip projector Teaching machines
DEPARTMENTS USING EQUIPMENT: Housekeeping Surgery Personnel	School of nursing Nursing service staff Rehabilitation Medicine Labs. Pediatrics Neurology Administration Security

TABLE XLIII

HOSPITAL QUESTIONNAIRE RESULTS

OHIO, Columbus

NAME AND ADDRESS OF HOSPITAL:	Grant Hospital of Columbus 309 East State Columbus, Ohio 43215
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	453 beds ; 24 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing Administrative Residency Inhalation Therapy -
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Programmed instruction Photography Blackboards Film strip projector Flannel boards Teaching machines Graphics, models, flips Patient monitoring system Video-tape equipment Computer-data processing
DEPARTMENTS USING EQUIPMENT: Personnel orientation Safety programs Fiscal services Department heads and supervisor training programs	Medical education School of nursing In-service programs Medical education Nursing service Dietary department

TABLE XLIV

HOSPITAL QUESTIONNAIRE RESULTS

OHIO, Toledo

NAME AND ADDRESS OF HOSPITAL: St. Vincent Hospital
2213 Cherry St.
Toledo, Ohio 43606

TYPE OF HOSPITAL: Private

BEDS AND BASSINETS: 609 beds

APPROVED TRAINING PROGRAMS: Residency
Internship
School of Nursing
School of Anesthesia
Radiologic Technology
School of Med. Tech.
Psychiatric Tech. Prog.
Unit Clerk Training Program

ORGANIZED A-V DEPARTMENT: Yes

NUMBER EMPLOYED: 1 BUDGET: Approx. $7,000- (materials only)

TYPES OF A-V EQUIPMENT USED:

Film projector	Slide projector
Tape recorder	Photography
Closed circuit TV	Blackboards
Overhead projector	Film strip projector
Loop boards	Motion pictures with sound
Video-tape equipment	Flannel boards
Computer -data proc.	Graphics, models, flips

DEPARTMENTS USING EQUIPMENT:

Medical photography	Radiology	Credit union
Staff development	Nuclear medicine	Resp. therapy
Pathology	Medical education	Credit union
Surgery	Public relations	
Pediatrics	School of nursing	
Physical medicine	Administration.	

TABLE XLV

HOSPITAL QUESTIONNAIRE RESULTS

TENNESSEE, Memphis

NAME AND ADDRESS OF HOSPITAL:	Baptist Memorial Hosp. 899 Madison Ave. Memphis, Tenn. 38104
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	1500 beds; 72 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia School of Radiologic Tech. School of Medical Tech. School of Med. Rec. Sc. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	1
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Opaque projector Photography dept. Blackboards Film strip projector Graphics, models, flips Patient monitoring system Video-tape equipment Computer
DEPARTMENTS USING EQUIPMENT: Medical staff Personnel Almost every dept.	Nursing Pathology Radiology Medical records Administration

TABLE XLVI

HOSPITAL QUESTIONNAIRE RESULTS'

TEXAS, Austin

NAME AND ADDRESS OF HOSPITAL:	Austin State Hospital 4110 Guadalupe St. Austin, Texas
TYPE OF HOSPITAL:	State
BEDS AND BASSINETS:	1,750 beds
APPROVED TRAINING PROGRAMS:	Residency School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Slide projector Programmed instruction Photography Blackboards Graphics, models, flips Video-tape equipment Computer- data processing
DEPARTMENTS USING EQUIPMENT:	Residency training programs Consultants Volunteer Center units

TABLE XLVII

HOSPITAL QUESTIONNAIRE RESULTS

TEXAS , Dallas

NAME AND ADDRESS OF HOSPITAL:	Baylor U. Medical Ctr. 3500 Gaston Dallas, Texas 75246
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	975 beds; 108 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia School of Radiologic Tech. School of Medical Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED: 3	BUDGET: $53,500
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Programmed instruction Opaque projector Photography dept. Blackboards Film strip projector Graphics, models, flips Patient monitoring system Video-tape equipment Computer- data processing
DEPARTMENTS USING EQUIPMENT:	Almost all departments

TABLE XLVIII

HOSPITAL QUESTIONNAIRE RESULTS

TEXAS, Houston

NAME AND ADDRESS OF HOSPITAL:	Sam Houston Memorial H. 1624 Pech Rd. Houston, Texas 77055
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	122 beds; O bassinets
APPROVED TRAINING PROGRAMS	None mentioned
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Slide projector Blackboards
DEPARTMENTS USING EQUIPMENT:	Nursing Medical staff Administration

TABLE XLIX

HOSPITAL QUESTIONNAIRE RESULTS

TEXAS , Houston

NAME AND ADDRESS OF HOSPITAL:	St. Joseph Hospital 1919 La Branch Houston, Texas 77002
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	712 beds; 54 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Radiologic Tech. School of Medical Tech. School of Med. Rec. Sc. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	Not mentioned
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Opaque projector Photography Blackboards Film strip projector Video-tape equipment
DEPARTMENTS USING EQUIPMENT:	Medical education Hospital services Medical staff

TABLE L

HOSPITAL QUESTIONNAIRE RESULTS

TEXAS, San Antonio

NAME AND ADDRESS OF HOSPITAL:	Santa Rosa Medical Center P.O. Box 7330 719 West Houston San Antonio, Texas 78207
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	828 beds; 40 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. School of Med. Rec. Sc. Administrative Residency Residency in Dietetics Histologic Technician
ORGANIZED:A-V DEPARTMENT:	Yes

NUMBER EMPLOYED: 5 BUDGET: $56,500

TYPES OF A-V EQUIPMENT USED:

Film projector	Opaque projector
Tape recorder	Photography department
Closed circuit TV	Blackboards
Overhead projector	Film strip projector
Slide projector	Graphics
Programmed instruction	Patient monitoring system
	Video-tape
	Computer - data processing

DEPARTMENTS USING EQUIPMENT:

Volunteers	Pharmacy	Medical education	EEG
Laundry	Central Supply	Interns	EKG
Dietary	Physical Therapy	Residents - Fellows	Lab.
Administration	Maintenance	Medical staff	
Information	Biomedical	Nursing service	
Inhalation Therapy	Personnel.	Business office	
O. P. Clinics		Medical Library	
Housekeeping			

TABLE LI

HOSPITAL QUESTIONNAIRE RESULTS

UTAH, Salt Lake City

NAME AND ADDRESS OF HOSPITAL:	University Hospital 50 North Medical Drive Salt Lake City, Utah 84112
TYPE OF HOSPITAL:	University
BEDS AND BASSINETS:	273 beds; 22 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	2 -
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Opaque projector Photography Blackboards Teaching machines Video-tape recording eq.
DEPARTMENTS USING EQUIPMENT: Cardiology ENT Intermountain Regional Medical Program	Neurology Surgery Metabolism Anesthesiology Home Dialysis Psychiatry Radiology Radiation Therapy

TABLE LII

HOSPITAL QUESTIONNAIRE RESULTS

D.C., Washington, D.C.

NAME AND ADDRESS OF HOSPITAL:	Georgetown U. Hospital 3800 Reservoir Rd. NW Washington, D.C. 20007
TYPE OF HOSPITAL:	University
BEDS AND BASSINETS:	396 beds; 50 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Anesthesia School of Radiologic Tech.
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	11
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Photography Blackboards Film strip projector Teaching machines Graphics, models, flips Video-tape equipment
DEPARTMENTS USING EQUIPMENT: School of Medicine School of Nursing Staff development	Surgery Psychiatry Pediatrics OB-Gyn. Orthopedics Radiotherapy

TABLE LIII

HOSPITAL QUESTIONNAIRE RESULTS

WASHINGTON, Seattle

NAME AND ADDRESS OF HOSPITAL:	Providence Hospital 17th and East Jefferson Seattle, Washington 98122
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	336 beds; 12 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Radiologic Tech. School of Medical Tech. School of Med. Rec. Sc. Administrative Residency
ORGANIZED A-V DEPARTMENT:	No
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Opaque projector Photography Blackboards Film strip projector Video-tape equipment
DEPARTMENTS USING EQUIPMENT: Radiology Rehab. Service	Nursing service Hospital relations Respiratory therapy Medical records Pathology Medical staff Housekeeping Research labs. Pharmacy Personnel

TABLE LIV

HOSPITAL QUESTIONNAIRE RESULTS

WISCONSIN, Madison

NAME AND ADDRESS OF HOSPITAL:	U. of Wisconsin Hospitals 1300 U. Avenue Madison, Wisconsin 53714
TYPE OF HOSPITAL:	University
BEDS AND BASSINETS:	730 beds; 16 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech. Administrative Residency
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	Not mentioned
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Programmed instruction Opaque projector Photography Blackboards Film strip projector Flannel boards
Patient monitoring system	Teaching machines
Video-tape equipment	Graphics, models, flips
Computer- data processing	Loop boards
DEPARTMENTS USING EQUIPMENT:	All departments

TABLE LV

HOSPITAL QUESTIONNAIRE RESULTS

WISCONSIN, Milwaukee

NAME AND ADDRESS OF HOSPITAL:	St. Joseph's Hospital 5000 W. Chambers St. Milwaukee, Wis. 53210
TYPE OF HOSPITAL:	Private
BEDS AND BASSINETS:	560 beds; 85 bassinets
APPROVED TRAINING PROGRAMS:	Residency Internship School of Nursing School of Radiologic Tech. School of Medical Tech.
ORGANIZED A-V DEPARTMENT:	Yes
NUMBER EMPLOYED:	Not mentioned
TYPES OF A-V EQUIPMENT USED:	Film projector Tape recorder Closed circuit TV Overhead projector Slide projector Opaque projector Photography Blackboards Film strip projector Flannel boards Graphics, models, flips Computer - data processing
DEPARTMENTS USING EQUIPMENT:	Medical education
Medical records - Laundry - O. P.	Nursing service
Pharmacy Maternity	Housekeeping
Purchasing Auxiliary	Radiology
Administration Volunteers	Laboratory
Public relations Dietary	Medical library
Cardiology Med. Staff	Physical medicine

APPENDIX C

Photographs illustrating some of the features of an audio-visual education center located at Research Hospital and Medical Center, Kansas City, Missouri

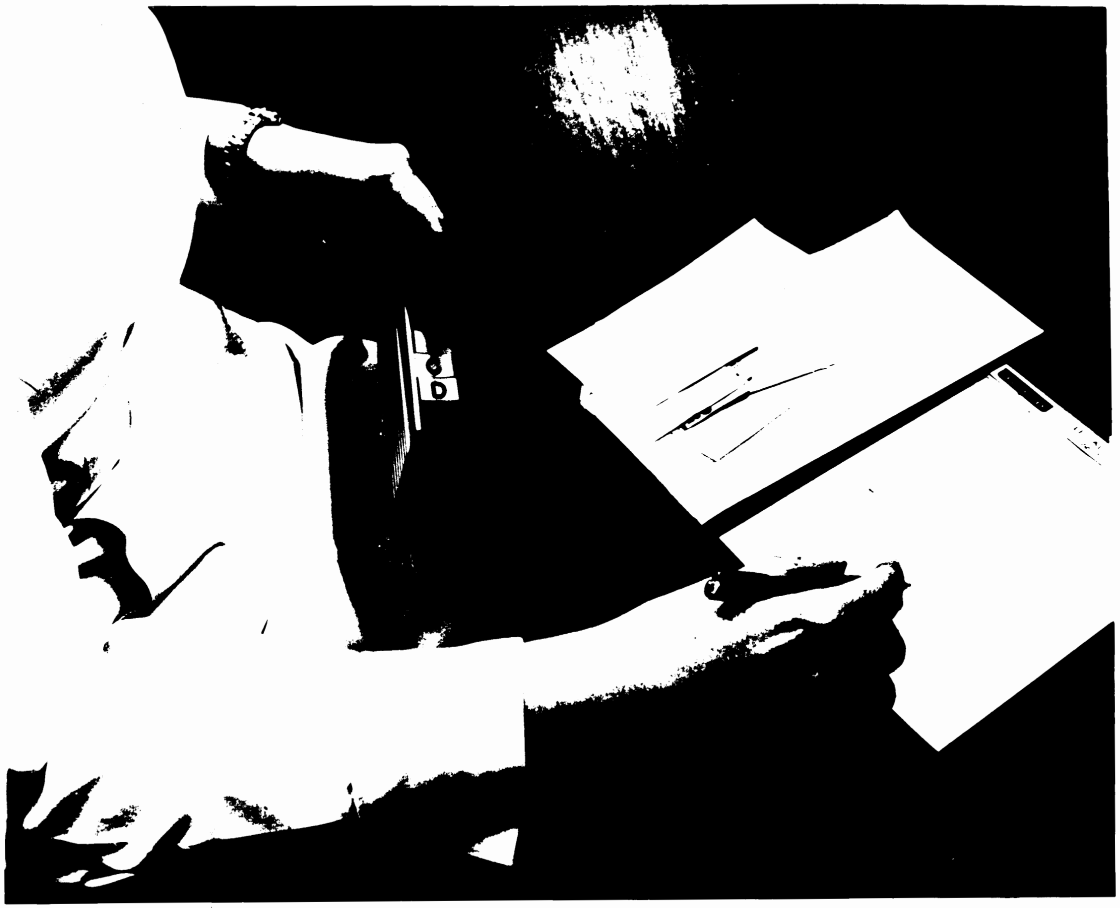
Photograph 1

From this control panel an instructor can operate sound and visual systems on a battery of projectors -

Photograph 2

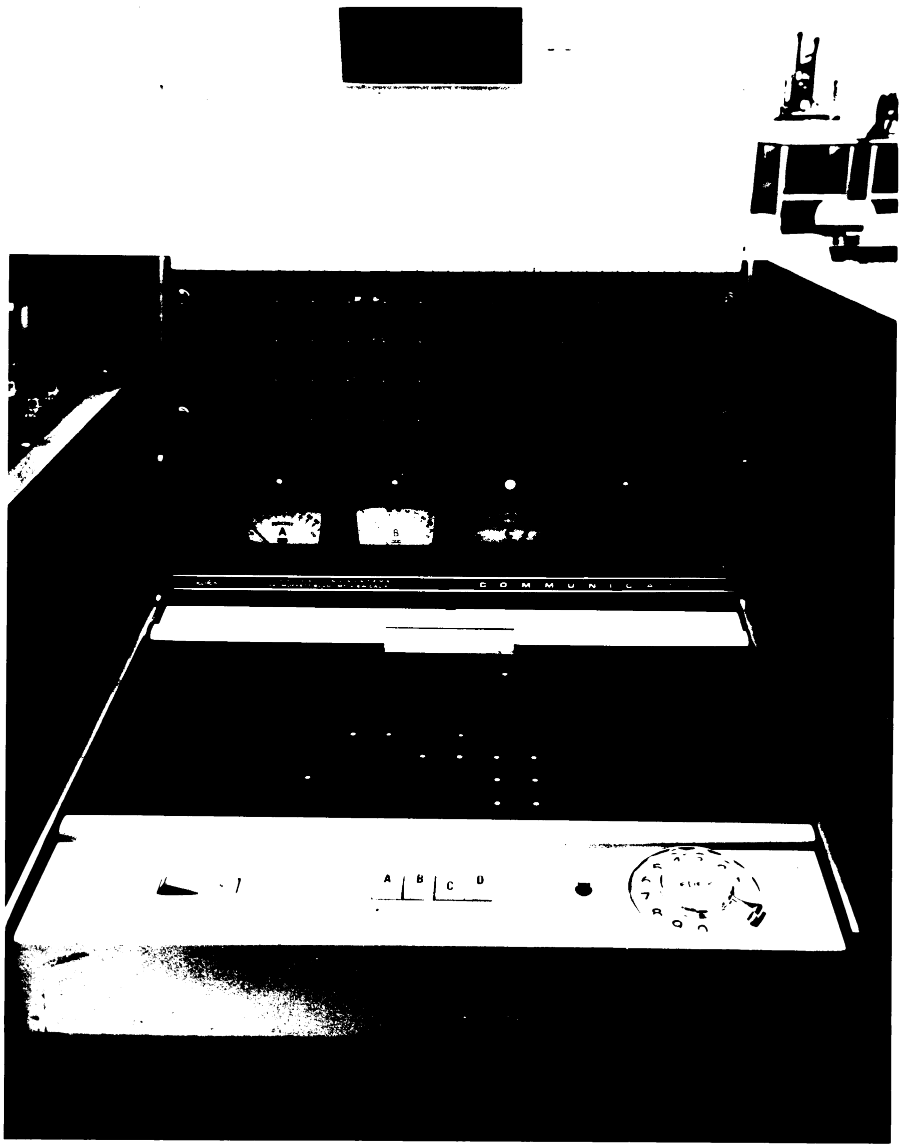
The modern design of the auditorium, which seats 145 includes all the versatility of audiovisual presentations available in the classroom, Instructors present slides, etc in theater setting.

Photograph 3



A 35 position student response system allows immediate and continued evaluation of teaching material. The student has a choice of four responses on individual responder control.

Photograph 4



This is the Master Console of Student Response System which permits the instructor to see at a glance the answers given to each question.

Forty hour method of

instruction course as

used in one hospital.

FORTY HOUR METHOD OF INSTRUCTION COURSE
(Research Hospital and Medical Center - Kansas City, Missouri)

SUBJECT	NUMBER OF HOURS	DESCRIPTION OF SUBJECT
Orientation and Fundamentals of Effective Instruction	1 hour	The purpose of the instruction training, student and his characteristics, characteristics of a good instructor, how the instructor can improve, five stages of instruction, and the conduct of the course and the assignment of practical work will be reviewed in this session.
Principles of Learning	1 hour	The need for an understanding of basic principles of learning, the nature of learning in terms of how we learn, the six fundamental principles of learning and their application in method of instruction will be reviewed.
Planning the Lesson	2 hours	Steps taken by the instructor in the preparation stage, an estimate of the instructional situation, selection and organization of material, writing the lesson plan, rehearsal of lesson and final check of physical set-up, practical exercise in drawing up a lesson plan will be reviewed in this session.
Presenting Oral Instruction	1 hour	The organization of oral instruction into introduction, explanation and summary; the purposes and elements of an introduction; achieving a meaningful explanation

SUBJECT	NUMBER OF HOURS	DESCRIPTION OF SUBJECT
Presenting Oral Instruction Continued		through organization and transition; how to keep the explanation interesting; uses of the summary; and contents of the summary or final review will be studied.
The Student Short Talk	3 hours	Each student will plan and present a short talk (3 - 5 minutes) in which they apply the techniques of giving an effective introduction. The talk will be critiqued by other students.
Speech Techniques	1 hour	Factors affecting oral instruction, the importance of getting contact and keeping it, how the instructor can control nervousness, posture, movements and gestures in speech, avoiding mannerisms, being heard and understood, and how to develop effective speech habits will be discussed.
Training and Visual Aids	2 hours	Why use training and visual aids, the characteristics of a good aid, specific points to observe in the use of aids, types of aids, their special uses, availability and construction.
Student Short Talk	8 hours	Each student will plan and present a short talk (10-15 minutes) in which he applies the techniques of Effective Oral Instruction and speech; training aids should be used; a lesson plan will be submitted by each student; the presen-

SUBJECT	NUMBER OF HOURS	DESCRIPTION OF SUBJECT
Student Short Talk Continued		tation will be critiqued by other students and then by the instructor.
Questioning Techniques	1 hour	The need for questioning an effective instruction; a conference and a lecture; advantages of questioning; characteristics of a good question; procedure in asking a question; and handling student answers.
The Demonstration Method	1 hour	The value of the demonstration method, the use of the demonstration method, forms of demonstration, conduct of a demonstration, and sample demonstration lessons will be conducted.
The Application Stage	1 hour	The importance of doing in class instruction; how we learn skills; methods of application and their uses; conduct of practical exercises; and critique of practical work.
The Examination Stage	1 hour	The reasons for testing; type of tests and their uses; characteristics of a good test; the administration of tests; and the critique of practical work.
Student Lesson	15 hours	Each student will plan and present a long lesson (30-35 minutes) in which he will apply those instructional techniques most applicable to the type of subject matter for which he will be responsible in his training; a lesson plan will be submitted for

SUBJECT	NUMBER OF HOURS	DESCRIPTION OF SUBJECT
Student Lesson Continued		grading; the lesson will be critiqued by another student and the instructor.
Final Examination and Review	2 hours	A comprehensive written test, covering conference work, during the first hour. Review of the test during the second hour.

APPENDIX D

RESOURCE AREAS FOR AUDIOVISUAL MEDIA

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
<u>Dietetics</u> Programmed course for food service personnel Program on Food Sanitation: 1. Bacteriology 2. Transmission of Disease 3. Food-borne Diseases & Personal Hygiene 4. Sanitary Food Handling	Programmed instruction (By Aimee N. Moore)	Dept. of Nutrition & Dietetics U. of Missouri City ?? Rental $5.00 per month
<u>Nursing</u> Audio-Visual materials on nursing and health subjects	Films	ANA-NLN Film Library 267 W. 25th St. New York, N.Y. 10001 (rental basis)
<u>Nursing</u> Fundamentals of Nursing	Film loops	J.B. Lippincott Co. East Washington Square Philadelphia, Pa. 19105 ($21.50 for silent cartridge $77. to $200. for sound cartridge)

(continued)

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Nursing Fundamental nursing series in seven study units Sanitation Basic unit procedures Utility - room procedures Body mechanics applied to nursing Geriatric procedures	Film in 8 mm. color sound film loops with instructor's guides and technicolor projector	The Blakiston Division, McGraw-Hill Book Co. 330 W. 42nd St. N. Y. 10036
Training of Hospital Employees Audio-Visual aids - Units for food service employees, housekeeping and fire safety procedures and nursing education	35 mm. color and sound filmstrips	Trainex Corp. Box 116, Garden Grove, California 92642. (free 10-day trial preview and variety of package programs - also leasing plan)
Nursing; Surgical Procedures; Communications; Patient Care Unit; Housekeeping; Laundry. Programs for areas listed	Audio-Visual modules	AMSCO Vi-Com AMSCO Hospital Division American Sterilizer Co. 2424 W. 23rd St., Erie, Pa. 16512
Patient Monitoring Normal and abnormal EKG Sinus rhythm Atrial tachycardia Nodal rhythm A-V block, sinus bradycardia, nodal premature contractions	2-channel magnetic tape playback device Tutor-Voice/Data Playback	Physiological Training Co. Division of Wolff Industries 2485 Huntington Dr. San Marino, Calif. 91108

(continued)

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Medical Technology Bone-marrow aspiration Laboratory identification of Strept. agalectiae Pseudomonas infections of respiratory tract Rh hemolytic disease of the newborn, etc.	Cassettes 12 tapes	ASCP 710 W. Wolcott Ave. Chicago, Ill. 60612
Employee Training Some topics included are elementary body mechanics, moving a patient in bed, wheelchair transport, making beds occupied and unoccupied	Film - about 15 min. in length - films cartridge - loaded in continuous loop	The Comprenetics System 9278 Santa Monica Blvd. Beverly Hills, Calif. 90210
Food Service Series on food service	As above	Compre-Vue Program as above
General hospital topics and food service Aids to Diagnosis Therapy with Oxygen and Other Gases Introduction to Asepsis Closed Drainage of the Chest Taking Care of Diabetics Sanitation for Food-Service Employees	Filmed programmed instruction course using the Transmedia machine	Transmedia Educational Systems, Inc. Tech Laboratories, Inc. 500 Tenth St. Palisades Park, N.J. 07650

(continued)

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Housekeeping It's Your Challenge Housekeeping's Place on the Hospital Team Your Responsibility to Patients Safety Begins with You How to Lift Properly You and Good Health You and Bacteria	16 mm. color film	Huntington Laboratories, Inc. Huntington, Ind.
Nursing General program: Philosophy of Supervision, An introduction to the Nursing Care Plan; The Team Conference; Philosophy of Team Nursing; Team Assignments; Nurse-Patient Communication; Staff Communication; Fire Safety. Other topics available: An Introduction to Posture Body Alignment & Prevention of Contractures Body Mechanics of the Nurse Observing the Patient & Charting Prevention & Treatment of Decubitus Ulcers The Patient in Traction Preventive Nursing Care of the Patient in Cast Care of the Orthopedic Patient Caring for the Patient in Isolation Fluids and Electrolytes	15 minute color-sound film - accompanied by programmed instruction booklet and post-test	Train-Aide Educational Systems by Pharmaseal Available from: Pharmaseal, 1015 Grandview Ave., Glendale, Calif. 91201

(continued)

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Nursing Basic Nursing Series on nursing recruiting	8 mm. films Film strip	Film Associates, 11559 Santa Monica Blvd. Los Angeles, Ca. 90025 (sold individually at $20) Series includes seven units Same - each $7.25, or series five in all $35.00
Nursing and various Anatomy and physiology series Basic patient-care series Central medical and surgical supply service operations Sex-education series	Filmstrips in sound and color	Robert J. Brady Co. Prentice-Hall Inc. 130 Que St., N.E. Washington, D.C. 20002 (designed to be used either with CBS Lab./Viewlex AVSIO or new Dorsett self-instructional machine (further info from company
Central Service Department Various - sterilization, etc.	10 audio-visual modules	American Sterilizer Co. AMSCO Vi-Com ...
Housekeeping The Easy Way to Beautiful Floors	Film clips and records	Vestal Laboratories Division of W.R. Grace & Co. St. Louis, Mo. 63100

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Housekeeping A Floor Care Program	35 mm. slides	Economics Lab. Inc. 250 Park Ave. New York, N.Y. 10017
Housekeeping The Treatment and Maintenance of Concrete Floors Your Asphalt Tile Floor -- Its Care and Maintenance Your Terrazzo or Oxychlorid Floor and How to Maintain It Hospital Housekeeping	35 mm. films with records	Multi-Clean Products Inc. 2277 Ford Parkway St. Paul, Minn. 55116
Nursing Service Prevention and Control of Staphylococcal Infections	16 mm. film, sound	Communicable Disease Center, Atlanta, Ga. 30300
Employee Training How to Train How to Employ People	Films	Standard Brands Sales Co. Division of Standard Brands, Inc., 625 Madison Ave., New York, N.Y. 10022

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
<u>Housekeeping</u> General Cleaning (Surgery and Delivery) General Cleaning (Non-Patient Areas) Hospital Patient Room Cleaning Restroom Cleaning Hospital Dismissal Cleaning Bed Making. Floor Care. Policing. Hospital Isolation Care --- Daily Hospital Isolation Care --- Dismissal Cleaning	35 mm. slides	Red Top, Inc. P.O. Box 22003 Denver, Colo. 80222
<u>Housekeeping</u> Housekeeping Orientation Custodial Duties Cleaning the Occupied Room Cleaning the Isolation Room Cleaning the Check-Out Room	Film clips and records (visual aids for other departments, also.)	Trainex Corp. P.O. Box 118 Garden Grove, Calif. 92842
<u>Personnel Staff Training</u> Courtesy	15 min. 35 mm. filmstrip, sound-color.	American Hotel and Motel Association, 221 W. 57th St. New York, N.Y. 10019

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
<u>Personnel Training</u> Styles of Leadership Person to Person Communication Pattern for Instruction	16 mm. films	Roundtable Films, Inc. 275 Beverly Dr. Beverly Hills, Calif. 90212
<u>Personnel training</u> Every Minute Counts (Tardiness and Absenteeism)	10 minute film	Visual Instruct. Service Iowa State College Ames, Iowa
<u>Personnel Training</u> Supervisor as a Leader	Film	U.S. Office of Education Film Division Washington, D.C. 20025
<u>Nursing</u> Audio-visual laboratory	20 carrels, tape playback machine, carousel slide projector, super 8 mm. projector and wide assortment of equipment used daily by nurses. Worksheet	Delta School of Nursing University Center Ann Arbor, Michigan Attention: Crystal M. Lange, R.N. Associate Professor

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Many areas Ready-made instructions	Programmed instructions	Reconnaissance Inc. 1801 Prairie Ave. Chicago, Ill. 60616 Didactics Inc. 700 Grace St. Mansfield, Ohio 44900 Honor Products 50 Moulton St. Cambridge, Mass. 02138
All hospital areas Film Reference Guide for Medicine and Allied Sciences	Source book	U.S. Gov't Printing Office Washington, D.C. $2.50 U.S. Public Health Serv. Publication, 487, 1964
Nursing - Coronary Care Instruction in coronary care adaptable to diverse teaching situations and rates of learning	Multi-media -films, filmstrips, audio tapes, with lectures, demonst. problem-solving and preceptor training	Rocom Company (under Modern Hospital)

DEPARTMENT AND TITLE	TYPE VISUAL AID	ADDRESS OF RESOURCE
Personnel Training General information	Various	Sony Corp. of America 47 Van Dam St. Long Island City New York 11100
Same	Same	Eastman Kodak Co. Rochester, N.Y. 14600
Same	Same	Audio-visual Division DuKane Corp. St. Charles, Ill. 60174
Dietary and Food Service Understanding Cooking (By Dr. Lendal Lund-berger, PhD.)	Programmed Inst. plus colored slides	Bookstore U. of Massachusetts Amherst, Mass. 01002 $4.95
Programmed Instruction designed programs to meet specific requirements of an institution	Programmed Instruction	Reconnaissance Inc. 1801 Prairie Ave. Chicago, Ill. 60616
		Didactics Inc. 700 Grace St. Mansfield, Ohio 44900