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# THE STATUS OF PATIENT EDUCATION PROGRAMS IN TWENTY EAST TENNESSEE HOSPITALS

A Dissertation

Presented for the

Doctor of Education

Degree

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## ABSTRACT

The purpose of this descriptive research was to determine the status of patient education in twenty East Tennessee hospitals. For the purpose of this study, patient education program was defined as "educational activities based on an instructional plan which includes specified educational objectives and methods of teaching for the patient and/or the patient's family."

Data concerning patient education programs in East Tennessee hospitals were collected and analyzed. The data were collected through utilization of a questionnaire developed by the investigator.

The following research objectives directed the study:

1. Identification of levels of administrative responsibility for patient education programs in East Tennessee hospitals.

2. Identification of types of patient education programs in East Tennessee hospitals.

3. Identification of planning procedures for patient education programs.

4. Examination of implementation procedures for patient education programs and barriers to the implementation of the programs.

5. Examination of the utilization of media in patient education programs.

6. Examination of assessment and evaluation procedures for patient education programs.

Analysis of the data enabled the investigator to draw the following conclusions:

1. Patient education is a part of the patient care process in East Tennessee hospitals.

2. Hospitals in East Tennessee have initiated and implemented the same types of patient education programs as other United States hospitals.

3. The Nursing Department is primarily responsible for the planning, implementation, and evaluation of patient education programs in East Tennessee hospitals.

4. Few hospitals disciplines are represented on the patient education committee.

5. Personnel responsible for the development of patient education programs are usually nurses who have little preparation in the field of education.

6. Few East Tennessee hospitals had separate budgets for patient education.

7. Few East Tennessee hospitals had staff members whose sole function is to develop patient education programs.

8. There is little evidence of the utilization of needs analysis data in program planning.

9. Unstructured verbal instruction is the most frequently utilized teaching method in East Tennessee hospitals.

10. Although audiovisual materials are often utilized for portions of patient education programs, there are few hospitals who have staff members whose function is to produce these programs.

11. Nurses have the responsibility for most of the direct patient teaching in the hospitals.

12. There is no serious attempt to assess the learning needs and characteristics of the patients.

13. There is little evidence of formative evaluation of patient education programs in East Tennessee hospitals.

14. There is no organized summative evaluation process for patient education programs in East Tennessee hospitals.

The investigator developed recommendations for improvement of patient education programs in East Tennessee hospitals.

TABLE OF CONTENTS


| CHAPTER | | PAGE |
|---|---|---|
| I. | THE PROBLEM | 1 |
| | Overview | 1 |
| | Purpose of the Study | 8 |
| | Statement of the Problem | 8 |
| | Definition of Terms | 9 |
| | Assumptions | 9 |
| | Limitations and Delimitations | 10 |
| | Need for the Study | 10 |
| | Organization of the Study | 12 |
| II. | REVIEW OF RELATED LITERATURE | 13 |
| | Patient Education in United States Hospitals | 13 |
| | Effect of Patient Teaching on Patient Care Outcomes | 24 |
| | Effective Methods of Instruction in Patient Education | 30 |
| | Summary | 45 |
| III. | METHODS AND PROCEDURES | 49 |
| | Population | 49 |
| | Instrumentation | 50 |
| | Survey Distribution | 55 |
| | Analysis of Data | 55 |
| | Summary | 56 |
| IV. | ANALYSIS OF DATA | 57 |
| | Introduction | 57 |
| | Questionnaire Responses | 58 |
| | Selected Comparative Data | 90 |
| | Elements of An Ideal Patient Education Program | 97 |
| | Summary | 100 |
| V. | SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS | 101 |
| | Summary | 101 |
| | Findings | 103 |
| | Conclusions | 115 |

PAGE

Recommendations . . . . . 116
Implications for Further Study . . . . . 120

BIBLIOGRAPHY . . . . . 122

APPENDIX . . . . . 126

VITA . . . . . 134

## LIST OF TABLES


| TABLE | | PAGE |
|---|---|---|
| I. | Titles of Respondents | 58 |
| II. | Job Titles of Immediate Supervisors of Respondents | 59 |
| III. | Hospital Departments Responsible for Patient Education | 60 |
| IV. | Educational Preparation of Respondents | 61 |
| V. | Ideal Educational Preparation for Respondents | 62 |
| VI. | Comparison of Actual and Ideal Educational Preparation of Respondents | 63 |
| VII. | Names of Patient Education Committees | 66 |
| VIII. | Membership on Patient Education Committee | 66 |
| IX. | Titles of Professional Personnel Directing Patient Education Programs | 67 |
| X. | Titles of Professional Personnel Directing Ideal Patient Education Programs | 67 |
| XI. | A Comparison of the Titles of Personnel Directing Patient Education in Actual and Ideal Programs | 68 |
| XII. | Techniques for Obtaining Needs Assessment Data | 69 |
| XIII. | Assessment Techniques for Patient Education Programs | 70 |
| XIV. | Types of Inpatient Education Programs for Specific Patient Populations | 71 |
| XV. | Types of Education Programs for Specific Outpatient Populations | 72 |
| XVI. | Personnel Responsible for Direct Teaching in Patient Education Programs | 74 |

| TABLE | | PAGE |
|---|---|---|
| XVII. | Personnel Responsible for Direct Teaching in an Ideal Patient Education Program . . . . | 75 |
| XVIII. | A Comparison of Personnel Responsible for Direct Teaching in Actual and Ideal Patient Education Programs . . . . . | 75 |
| XIX. | Documentation Procedures for Patient Education . . . . . | 76 |
| XX. | Techniques for Evaluation of Learning . . . . | 77 |
| XXI. | Evaluation Techniques for Patient Education Programs . . . . . | 78 |
| XXII. | Methods of Instruction for Patient Education Programs . . . . . | 79 |
| XXIII. | Audiovisual Materials Utilized for Patient Education . . . . . | 80 |
| XXIV. | Audiovisual Equipment Purchased by East Tennessee Hospitals for Patient Education Programs . . . . . | 82 |
| XXV. | Types of External Television Facilities Used in Production of Patient Education Programs . . . . . | 83 |
| XXVI. | Departments Employing Media Specialists and Titles of Media Specialists . . . . . | 84 |
| XXVII. | Types of Evaluation Personnel in Actual and Ideal Patient Education Programs . . . . . | 85 |
| XXVIII. | Barriers to Implementation of Patient Education Programs . . . . . | 86 |
| XXIX. | Inpatient Programs for Specific Patient Populations . . . . . | 90 |
| XXX. | Education Programs for Specific Outpatient Populations . . . . . | 91 |
| XXXI. | Audiovisual Materials Utilized for Patient Education . . . . . | 92 |

TABLE PAGE

XXXII. Membership on Patient Education Committees . . . . . 94

XXXIII. Departments Designated to Coordinate Patient Education Programs . . . . . 95

XXXIV. Hospital Personnel Participating in Patient Teaching . . . . . 96

# CHAPTER I

# THE PROBLEM

## I. OVERVIEW

Although health education has long been an integral part of patient care in hospitals, it has not always been well planned, coordinated, and evaluated. There is now increasing need for patient education efforts to be well managed. Several factors have contributed to this need.

One factor has been the growth of consumerism among recipients of health care. Consumers are demanding to receive full information about treatment alternatives, and to have a part in decision-making regarding their care and treatment.

A second factor is the emphasis on preventative medicine, and patients have become aware of the fact that they can participate in their own care through elimination of health risk factors such as smoking and obesity. When they are ill they can participate in their own care through cooperation with health personnel. It has been shown that patient education has a positive effect on patient compliance to a treatment regimen.

A third factor is the fact that the informed patient can provide a better health history, and this can help

health professionals to make a quick diagnosis. Treatment can be rapidly initiated, and this means a quicker and less costly recovery period for the patient.

There has been an increase in the number of persons who have chronic illnesses. This is related in part to the fact that the population of the United States is aging. More persons than ever before are in the over sixty-five age range, and this trend will continue as the persons born during the "baby boom" grow older. The number of available treatments for chronic diseases has increased, and patients need information to make intelligent decisions regarding their care.

The patient is now viewed as having a right to obtain relevant information regarding his physical condition. The House of Delegates of the American Hospital Association approved a document in 1973 outlining the right of the patient to obtain specific kinds of information including the following:

1. Information regarding diagnosis, treatment, and prognosis.

2. Information regarding procedures determined necessary for the care of the patient.

3. Information regarding need for transfer to other facilities.

4. Information regarding the relationship between the hospital and other health care and educational facilities and relationships among those treating the patient.

5. Information regarding the existence of research projects that may affect the patient.

6. Information regarding the patient's requirements for continuing health care following discharge. This statement is called the Patient's Bill of Rights, and it has been adopted as policy by numerous hospitals.

Patient education is important as it enables the patient to give informed consent. Although primary legal responsibility for seeing that the patient is properly informed regarding procedures, diagnosis, and prognosis lies with the physician, the hospital does have some legal responsibility. The hospital can be held liable, for example, if an employee is found guilty of negligence or battery as a result of performing a procedure for which formal consent is ordinarily required but not obtained. In order to protect itself from the possibility of such action the hospital must be able to document arrangements made in order to insure that the patient has the relevant information regarding a given procedure before it is performed.

The Joint Commission for the Accreditation of Hospitals has guidelines which specify that educational criteria should be established and approved by the respective professional

groups within a hospital. Evidence is required that the patient has demonstrated knowledge. The accreditation manual of the Joint Commission for the Accreditation of Hospitals makes the following statements concerning the patient education process:

> The patient has the right to obtain from the practitioner responsible for coordinating his care, complete and current information concerning his diagnosis (to the degree known), treatment, and any known prognosis. This information should be communicated in terms the patient can reasonably be expected to understand. When it is not medically advisable to give such information to the patient, the information should be made available to a legally authorized individual.[1]
>
> For each visit to the emergency service, the medical record shall contain documentation relating to . . . any instructions given to the patient and/or family for follow-up care.[2]
>
> . . . medical record requirements for home care patients include . . . signed and dated progress notes for each home visit including . . . any patient/family instruction given.[3]
>
> While the format and forms in use in the medical record will vary, all medical records shall contain the following: . . . Evidence of appropriate informed consent; when consent is not obtainable, the reason shall be entered in the record.[4]

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[1]American Hospital Association. Accreditation Manual for Hospitals. Chicago: American Hospital Association, 1979, p. xiv.

[2]Ibid., p. 28.

[3]Ibid., p. 61.

[4]Ibid., p. 72.

A brief and pertinent written nursing care plan should be developed for each patient; this nursing care plan must be coordinated with the patient's medical plan of care. . . . It may include: . . . patient and family teaching programs.[5]

If outpatient surgery is performed, the written procedures shall include provisions covering the following subjects . . . written preoperative instructions to patients covering: . . . applicable restrictions upon food and drink before surgery; any special preparations to be made by the patient; the patient's proximity to hospital for specific time following surgery, if applicable; an understanding that the patient may require admission to the hospital in the event of medical or anesthetic need; and a requirement that upon a patient's discharge following outpatient surgery, the patient must have a responsible person available to escort him to his home.[6]

Written instructions for follow-up care shall be given to the (out)patient.[7]

Because of the probable relationship between the quality of patient care and the outcome that the patient experiences as a result of intervention by physicians and other health care professionals, criteria shall include patient care outcomes, such as . . . demonstrated knowledge of the patient concerning his health status, level of functioning, and self-care after discharge.[8]

Responsibilities of pharmaceutical services include . . . the instruction of the patient or of the appropriate nursing service personnel who advise the patient, verbally or in writing, on the importance and correct use of medication to be taken following discharge, in the interest of assuring safe and correct self-administration, when such instruction is requested by the responsible practitioner or as provided by written medical staff policy.[9]

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[5]Ibid., p. 106.

[6]Ibid., p. 111.

[7]Ibid., p. 111

[8]Ibid., p.

[9]Ibid., p. 134.

The statements of the Joint Commission could be summarized in the following way:

1. The patient has a right to obtain information concerning all aspects of his care.

2. Patient education criteria should be developed as part of patient care outcomes.

3. Patient participation in health education should be documented on a routine basis.

Hospital personnel planning to implement patient education programs to meet Joint Commission criteria should consider providing the patients with various types of learning experiences since individual learning styles vary. Mediated instruction can provide many different types of learning experiences, and provide other instructional benefits as well. The use of audiovisual materials in instruction can provide consistency of instruction, help to maintain a high interest level in learners, and result in saving of staff time.

An important form of media used for health education is television. Although there is some doubt that health messages presented via commercial television have positive effects on human behavior, the use of cable television is another matter. It is possible through the use of cable television to direct a message to a very specific patient population. Since the instruction is planned to meet the

needs of a specific patient population, it is more effective in producing behavioral change in viewers than programming planned for the masses.

Patient instruction through the utilization of various teaching methods has been linked with positive patient care outcomes, but patient teaching is most effective when it is a part of a well-defined and well-administered program. Relatively few hospitals have well established patient education programs due to barriers to the implementation of these programs. Some of the reported barriers are the following:

1. Patient education programs are too costly.

2. There are not enough facilities or resources available for patient education.

3. The hospital medical staff is not always interested in helping to develop a patient education program.

4. Nurses are not always enthusiastic about participating in patient education.

5. Hospital administrators do not always perceive the need for patient education.

6. Patient education may increase the length of hospital stay for the patient.

To overcome these barriers and develop effective patient education programs is a great challenge for the patient educator.

## II. PURPOSE OF THE STUDY

The purpose of this study is to examine the status of patient education programs in East Tennessee hospitals.

## III. STATEMENT OF THE PROBLEM

This descriptive study will be designed to examine the following specific aspects of patient education programs in East Tennessee hospitals.

1. Identification of patient education programs in East Tennessee hospitals.
2. Examination of the content and structure of the patient education programs.
3. Analysis of the implementation and evaluation procedures for the patient education programs.
4. Examination of the utilization of mediated instruction in patient education programs.
5. Examination of relevant literature related to patient education.
6. Comparison of the status of patient education programs in East Tennessee with program elements identified in the literature.
7. Development of recommendations for the improvement of patient education programs in East Tennessee hospitals.

## IV. DEFINITION OF TERMS

East Tennessee. The area encompassed by the East Tennessee Development District which includes the following counties: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, and Union.

Patient Education Program. Educational activities based on an instructional plan which includes specified educational objectives and methods of teaching for the patient and/or the patient's family.

Learning Style. The type of sensory input necessary for efficient acquisition of information by the learner.

Hospital. An institution for the reception and treatment of the sick or wounded.

Behavioral Change. The difference in the target performance and the preinstructional performance of the learner.

Short-term Care Institution. An institution in which the average length of stay for all patients is less than 30 days or over 50% of all patients are admitted to units where the average length of stay is less than 30 days.

## V. ASSUMPTIONS

1. Respondents will have sufficient experience in the development of patient education programs to respond meaningfully.

2. Respondents will give accurate information concerning patient education programs in their respective institutions.

## VI. LIMITATIONS AND DELIMITATIONS

Research was delimited to a study of programs developed by patient educators in twenty East Tennessee hospitals.

The validity of this study was limited by the following:

1. The possible tendency of subjects to respond to questions with answers that were thought to be expected.

2. The possibility that patient education programs are not implemented in patient care areas as intended by patient education planners.

3. The limited length of exposure of this researcher to the environments of the hospitals taking part in the study.

## VII. NEED FOR THE STUDY

Although there have been several studies concerning the status of patient education in United States hospitals, there has never been a study limited to hospitals in the East Tennessee area. This study will provide a basis for comparing the status of patient education in East Tennessee hospitals with the status of patient education in other hospitals across the nation.

In the present study mediated instruction will be examined within the framework of the instructional process in patient education programs. Previous studies have not been designed to gather complete data relative to this aspect of instruction. Aspects of mediated instruction covered in the present study include the following:

1. Identification of audiovisual equipment and materials utilized for patient education in the hospitals taking part in the survey.

2. Identification of distribution systems for mediated instruction in the hospitals.

3. Acquisition of descriptive evidence concerning effective utilization of mediated instruction as described in the literature.

Previous studies did not gather data relative to the opinions of the patient educators concerning certain aspects of patient education programs. Since the perceptions of the patient educators directly affect the development of these programs, attention should be given to this type of data. Patient educators will be asked to express their opinions concerning the following aspects of patient education programs:

1. Ideal educational preparation for the patient educator.

2. Hospital personnel who should be responsible for directing patient education programs.

3. Hospital personnel who should be primarily responsible for direct patient teaching.

4. Hospital personnel who should be primarily responsible for evaluation of the patient education programs.

This topic is a timely one, as personnel in area hospitals are expressing more interest than ever before in the development of more effective patient education programs. Guidelines will be developed in this study for the improvement of patient education programs in these hospitals.

## VIII. ORGANIZATION OF THE STUDY

Chapter I contains the introduction to the problem, the statement of the problem, the purpose of the study, the assumptions, the limitations and delimitations, the definition of terms, and the need for the study.

Chapter II contains a review of related research and literature pertaining to patient education in hospitals.

Chapter III contains a presentation of the methodology and procedures used in relation to this study.

Chapter IV contains the presentation and analysis of the data.

Chapter V contains findings, conclusions, and recommendations.

# CHAPTER II

## REVIEW OF RELATED LITERATURE

### I. PATIENT EDUCATION IN UNITED STATES HOSPITALS

A study completed by the American Hospital Association[1] in 1975 provided an overview of inpatient education in American hospitals. Primary purposes of this study were the following:

1. To determine how the patient education function is being managed in United States hospitals.

2. To provide a basis for future studies in the area of patient education.

3. To make recommendations for developing effective patient education programs in hospitals.

4. To make recommendations for increasing the number of effective patient education programs in hospitals.

Data were obtained from 4,669 hospitals and 2,680 of these hospitals reported having at least one patient education program. For the purpose of this study inpatient education programs were defined as "educational activities

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[1]American Hospital Association. Hospital Inpatient Education: Survey Findings and Analyses. (Chicago: American Hospital Association, 1975).

with written goals and objectives for the patient and/or family during inpatient hospitalization."[2]

## The Patient Education Function in the Hospital Organization

In 45.5% of the hospitals having at least one patient education program a department was designated as having responsibility for coordination of patient education programs.

Departments most often designated to coordinate patient education programs were Nursing (in 57.6% of the cases) and Education (in 24.5% of the cases). Other departments designated to coordinate patient education activities were usually education related departments. The majority of these departments were related to inservice education or staff development.

## Patient Education Personnel

In 17.2% of the responding hospitals there was a committee responsible for setting patient education policy. This committee was often a generalized patient care committee. Few of these committees were designed to be solely concerned with patient education. Personnel on the committee in order of frequency of occurence were as follows: (1) nurse, (2) physician, (3) administrator, (4) educator, (5) dietician, (6) social worker, (7) patient representative, (8) trustee, (9) hospital volunteer, and (10) consumer.

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[2]Ibid., p. 24.

Of the hospitals designating a department responsible for patient education, 84.6% also identified a person in the department as having primary responsibility for patient education. In the final analysis only a few of these persons were actually responsible for patient education on a full-time basis.

## Budgeting for Patient Education

Funds were budgeted for patient education in 25.9% of the 2,680 hospitals having at least one patient education program. Rationale for not budgeting for patient education included the following:

1. Patient education was an integral part of departments having budgets.
2. Equipment could be borrowed from other departments.
3. Many free materials were available for use.

Dollar sources for patient education consisted of revenues generated by daily rates in 58.7% of the hospitals, while 7.5% of the hospitals utilized separate billing for patient education services.

## Planning for Patient Education

The primary target of patient education programs included the patient and his family in 62.4% of the cases. In only 31.8% of the hospitals was patient education limited to the patient alone.

Initial assessment of patient education needs was a part of the patient history taken by health personnel in 48.1% of the reporting hospitals. Separate interviews were held for the purpose of patient education assessment in 18.5% of the hospitals. In 9.7% of the responding hospitals, no initial assessment was done. Multidisciplinary team conferences were rare, taking place in only 8.8% of the cases. Planning for patient education intervention occurred in nursing care conferences in 58.5% of the cases, and in patient care conferences between nurses and physicians in 43.3% of the cases.

## Types of Patient Education Programs

The most frequently reported adult patient education programs were as follows: (1) Diabetes, (2) Nutrition, (3) Prenatal, (4) Ostomy, (5) Mastectomy, (6) Heart Attack, (7) Postnatal, (8) Preoperative, (9) Respiratory, and (10) Postoperative programs.

The most frequently reported pediatric patient education programs were as follows: (1) Diabetes, (2) Nutrition, (3) Orientation to hospital, (4) Preoperative, and (5) Postoperative programs.

## Implementation of Patient Education Programs

One to one teaching was the most frequently used methodology for patient education being utilized in 96.2% of

the cases. Small groups (containing 10 or fewer group members) were utilized less frequently in 31.3% of the cases. Large group instruction was utilized in only 11.8% of the cases. Nurses were most often cited as performing the patient teaching.

Thirty-six of the responding hospitals indicated specific areas in the hospitals serving as a focus for patient education activities. These patient education centers were located in the following types of areas: (1) classrooms; (2) renovated areas specially for patient use; (3) specific locations in inpatient settings.

Entry was gained to the center by self-referral in twenty-two of the thirty-six cases, and by staff referral in fourteen of the thirty-six cases. Fourteen of the thirty-six respondents did not indicate how patients gained entry to the patient education center. Some of the centers were open on a twenty-four hour basis while others were open on a limited basis.

Activities taking place in the center included classes, one-to-one staff-patient interchanges, materials given to patients, seminars, discussions, instructions given to patients, patients' questions answered, preadmission parties, luncheons, group therapy, demonstrations, lend materials, simulated delivery.

The ten most frequently utilized materials in the centers were as follows: (1) films, (2) pamphlets,

(3) videotapes, (4) closed circuit television, (5) records, (6) books, (7) displays, (8) slides, (9) models, and (10) training guides.

A wide range of health care providers were responsible for patient education activities, but nurses were the most often cited as responsible for providing patient education experiences. When the teaching function was integrated with other treatment tasks, all direct care givers were likely to be identified as patient educators. When the teaching occurred in a formalized manner such as in classes, a specific "health educator" was identified as having primary responsibility for patient teaching. Staff accountability mechanisms for patient education were rarely identified.

## Evaluation of Learning in Patient Education Programs

Observation of task performance was utilized to assess the impact of education on the patient in 79.6% of the cases. Interview of the attending physician was utilized in 21.8% of the cases.

## Evaluation of the Patient Education Program

The overall effectiveness of the patient education programs was assessed in a variety of ways. Interview of the staff was utilized in 46.5% of the cases. Statistical

comparisons of patient readmission rates were utilized for evaluation in 9.3% of the cases. Analysis of inpatient education referrals per total admissions was utilized for program evaluation in 5.8% of the hospitals.

Specific provision for documentation of patient education activities on the medical record was made in 67.5% of the cases. Documentation on nursing progress notes were indicated in 53.8% of the cases, a separate sheet for patient education was indicated as a place for documentation in 19.5% of the cases, and 21.3% of the hospitals documented patient education activities on the discharge planning sheet. Patient care outcomes were indicated to be a component of nursing audit in 68.7% of the cases.

## Guidelines for Implementation of Effective Patient Education Programs

The following guidelines were developed as a result of this study.

1. Management decisions concerning patient education should be made so that patient education processes fit the needs of the specific institutions.
2. Time must be set aside for assessment and initial planning, and responsibility must be designated for that planning.
3. A decision must be made concerning permanent responsibility for patient education.

4. The person to whom responsibility for coordination of patient education activities is given must have administrative support if the patient education program is to be successful.
5. The patient education coordinator must possess the skills to gain the cooperation and participation of other hospital departments.
6. The patient education coordinator should have the ability to identify and utilize outside resources.
7. The involvement and support of nursing management is necessary if a patient education program is to be successful.
8. A multi-departmental patient education committee serves two purposes:
   (a) cooperative involvement of the other departments is gained; and
   (b) the persons on the committee can provide assistance to the patient education coordinator in the planning, development, implementation, and evaluation phases of the patient education programs.
9. Goals and objectives for patient education should be defined so that the patient education coordinator can plan a budget and define methods of implementation.

10. The staff should receive inservice so that they will be comfortable with patient education activities.
11. The role of the patient education coordinator should be defined so that he/she will not be considered to be the sole "patient educator."
12. Patient education performance of the staff must be evaluated and rewarded.

## Utilization of Television for Patient Education

According to a survey conducted by the American Hospital Association[3] in 1978, television was utilized for patient education in 43.7% of the hospitals reporting operational or planned patient education programs. Video for patient education was externally produced in 86.8% of the cases and self-produced in 37.5% of the cases. Closed circuit television was utilized for patient education in 14.9% of the hospitals reporting operational or planned patient education programs.

## Recommendations for Effective Patient Education Programs

The American Hospital Association made the following recommendations after completing the 1978 survey.

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[3]American Hospital Association. Hospital Inpatient Education: Survey Findings and Analyses, (Chicago: American Hospital Association, 1978).

1. Joint efforts between universities and hospitals in the area of patient education evaluative research should be supported by national organizations and government agencies.

2. Effective utilization of new patient education tools and methods such as closed circuit television should be encouraged.

3. Decision-makers in health care institutions should be made aware of the value of planned, documented, and evaluated patient education programs in meeting the goals of the institutions.

4. Hospitals interested in developing effective patient education programs should make management decisions regarding coordinating department, evaluation, and budget that will accomplish this goal.

5. Health care staff should become more familiar with relevant research and more skilled in health education planning.

6. Health care staff should become more skilled at incorporating evaluation methodologies into program designs.

In a study by Rosen[4] data were obtained concerning patient education in United States hospitals. Rosen found

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[4]Anita Louise Rosen, Patient Education in Hospitals: A Survey of Current Conditions and Guidelines for Implementation, (Carbondale: Southern Illinois University, 1974).

that hospital staff most frequently participating in patient education activities were as follows: (1) nurse, (2) nutritionist/dietician, (3) social worker, (4) physical therapist and (5) inhalation therapist.

Rosen stated that outside consultants were utilized for patient education program development in 28.8% of the responding hospitals. Types of consultants most often were as follows: (1) health department personnel, and (2) school/university personnel.

Rosen found that patient education programs in responding hospitals were financed through daily rates in 87.5% of the cases. Outside funding was the source of revenue in 7.7% of the hospitals, and the patient was billed directly for patient education in 7.0% of the hospitals.

Rosen found that the greatest barrier to the implementation programs was cost. Other frequently cited barriers included lack of facilities and resources, and lack of available trained educators. For inpatient education the five most frequently cited types of programs included the following: (1) diabetes education; (2) cardiac education; (3) stroke education; (4) colostomy education; and (5) cancer/mastectomy education. The most frequently indicated programs for outpatient education included (1) alcohol/drug counseling; (2) diabetes education; (3) prenatal care; (4) hypertension education and (5) nutrition education.

Audiovisual communications resources available for use for patient education were the following: 86.8% of the responding hospitals and movie/slide equipment; 63.6% had recording/playback equipment; 34.1% of the hospitals had a videotape recorder, 29.8% of the hospitals had an educational display center; 17.9% of the hospitals had a closed circuit television system.

## II. EFFECT OF PATIENT TEACHING ON PATIENT CARE OUTCOMES

Linde[5] conducted a study in order to test the effect of a teaching program upon knowledge and compliance to a medical regimen of cardiac patients.

Evidence of compliance to a medical regimen consisted of the following elements:

1. Patients will follow a risk factor reduction regimen.
2. Patients will get appropriate laboratory tests.
3. Patients will attend clinic follow-up.
4. Patients will adhere to diet specifications.

Linde found that there was a significant difference between preoperative test scores and discharge test scores of the cardiac patients. There was no significant decline in knowledge after discharge. This was probably due to the

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[5]Beverly J. Linde and Nancy M. Janz, "Effect of a Teaching Program on Knowledge and Compliance of Cardiac Patients," Nursing Research, September-October 1979, pp. 282-286.

fact that continued reinforcement and teaching was available at each clinic visit. Compliance rates for patients in this study were higher than compliance rates for patients in earlier studies. Results of this study indicated that patient teaching clearly had a positive effect on patient knowledge and compliance to a medical regimen.

Putt[6] tested two nursing approaches to patient care. The first approach consisted of psychological support and the second approach consisted of patient instruction.

The hypotheses for the study were the following: Instruction is more effective than psychological support in increasing the patient's rate of healing, and reducing the patient's level of stress. Psychological support is more effective than routine nursing care in promoting healing and reducing stress.

The patients were divided into three groups. Group I received only the routine hospital nursing care. Group II received the benefit of an unstructured interaction period in addition to routine nursing care. Therapeutic processes utilized by the investigator for the sessions with the Group II patients were as follows:

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[6]Arlene M. Putt, "One Experiment in Nursing Adults with Peptic Ulcers," Nursing Research, November-December 1970, pp. 484-493.

1. The investigator offered herself as a listener.
2. The investigator accepted the patient and his statements.
3. The investigator encouraged the patient to describe his feelings.
4. The investigator encouraged the patient to clarify his feelings.
5. The investigator encouraged the patient to do self-evaluation and self-planning.
6. The investigator reviewed reality with the patient.
7. The investigator terminated the relationship with sustained concern for the patient.

Group III received the daily period of instruction in addition to routine nursing care. In the instruction period the investigator focused on teaching aspects of the illness, treatment, and healing. A booklet was used to facilitate instruction. The investigator evaluated the results of the instruction and reviewed the instructions when necessary.

Results of the study indicate that patients who received psychological support and patients who received instruction had a significantly shorter hospital stay than patients who received only routine nursing care. Patients who received structured instruction exhibited more relevant knowledge than patients who received routine nursing care. There was no significant difference in the group who

received only psychological support and the group who received instruction in relation to discomfort experienced.

Newcomer[7] investigated the effectiveness of a combined drug self-administration and patient teaching program. Self-administration of drugs is desirable for patients because it reduces the dependence of patients on health care personnel.

The purpose of the study was to determine if a program of inpatient drug self-administration and patient teaching would be an effective way to reduce post-hospital medication errors. Patient education information was given by the pharmacist. Instructions included the following topics: the name of the drug, the appearance of the drug, how the drug should be used, the hazards of drug misuse, how and when to take the drug, the interactions of the drug with non-prescription drugs and with foods, special instructions, and the proper storage of the drug. A drug reminder sheet was given to each of the patients which indicated the drug name and strength, use, route, time of administration, and adverse and allergic reactions.

It was found that the program of self-administration of drugs and patient teaching did not decrease the incidence

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[7]Darrell R. Newcomer and Roger W. Anderson, "Effectiveness of a Combined Drug Self-Administration and Patient Teaching Program," Drug Intelligence and Clinical Pharmacy, June 1974, pp. 374-381.

of missed doses, but it did increase the likelihood that patients would report adverse reactions of drugs to the physician.

It was concluded that the combination of drug self-administration and patient teaching could at least lower the potential for post-hospital drug errors.

Healy[8] studied the effect of preoperative instruction on the recovery of surgical patients. The total study population consisted of 321 surgical patients. The patients were divided into two groups. The patients in the experimental group were given extensive preoperative instructions concerning deep breathing, turning, coughing, body mechanics, and explanation of the specific procedures expected with the particular operation. The patients in the control group were not given preoperative instruction.

Patients in the experimental group experienced fewer postoperative complications and experienced a shorter hospital stay than patients in the control group. Healy concluded that preoperative instruction is well worth the time required to implement it. She estimated that the instruction requires ten to fifteen minutes of staff time per patient and it saved an infinitely greater amount of time postoperatively.

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[8]Kathryn M. Healy, "Does Preoperative Instruction Make a Difference?," American Journal of Nursing, January 1968, pp. 62-67.

The families of the patients in the experimental groups appeared to experience less anxiety as only five of the patients in the experimental had family members stay overnight in the hospital. In contrast, 96 of the patients in the control group had family members who stayed through the night.

Myers[9] studied the effects of different types of communication on the reactions of patients to the stress of illness. Subjects were selected and divided into three groups. Group I received detailed verbal information regarding procedures being performed. Group II patients received no communication from health care personnel. Group III patients received communication from health care personnel which was irrelevant to the procedures being performed.

It was found that patients who received the structured information regarding procedures were more accurate in their recall of the event. Analysis of data indicated that the patients who received the structured information were less tense about the procedure.

The investigators concluded that less tension is created in the patient if he/she is given specific information on

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[9]Mary E. Myers, "The Effect of Types of Communication on Patients' Reactions to Stress," Nursing Research, Spring 1964, pp. 126-131.

which to structure the experiences surrounding illness. The most desirable form of communication between patient and health personnel would be "structuring" communication. The least desirable form of communication is irrelevant conversation.

## III. EFFECTIVE METHODS OF INSTRUCTION IN PATIENT EDUCATION

Alkhateeb[10] made a comparison of three educational techniques used in a venereal disease clinic. The three educational techniques were as follows: (1) utilization of a programmed learning guide, (2) utilization of an instructional film, and (3) utilization of person-to-person interview.

Patients were assigned to one of three experimental groups and six control groups. Pre-tests were administered to test knowledge of content. The teaching was done and post-tests were administered. It was found that those patients exposed to the experimental techniques scored significantly higher on the post-tests than patients in the control groups. There was no significant difference between the scores of patients in the different experimental groups. These three methods were equally effective for instruction.

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[10]Waleed Alkhateeb, et al., "A Comparison of Three Educational Techniques Used in a Venereal Disease Clinic," Public Health Reports, March-April 1975, pp. 159-164.

The patients were then asked to rate the interest levels of the various modes of instruction. While only 17.7% of the subjects rated the programmed instruction as interesting, 85.4% of the subjects rated the audiovisual technique as interesting. The highest rating was given to the interviews which were considered to be interesting by 93.6% of the patients.

Lindemann[11] conducted a study to compare the effects on patient outcomes of unstructured and structured instruction.

Unstructured preoperative teaching consisted of the nurse giving the patient information on an informal basis. Structured preoperative teaching consisted of the development of a formal teaching plan to be used with every patient.

Results of the study indicated that the ability of the subjects to deep breathe and cough was significantly improved by the structured teaching method. The length of hospital stay was significantly reduced by the implementation of the structured teaching method. There was no difference between the structured preoperative teaching and the unstructured preoperative teaching methods with regard of the patient's need for analgesia postoperatively.

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[11]Carol A. Lindemann and Betty Van Aernam, "Nursing Intervention with the Presurgical Patient—The Effects of Structured and Unstructured Preoperative Teaching," Nursing Research, July-August 1971, pp. 319-332.

Lindemann[12] compared individual preoperative teaching and group preoperative teaching in relation to effect on patient care outcomes.

The following steps were utilized in implementing the group preoperative teaching.

1. Each skill was demonstrated and practiced separately.

2. The group practiced the new skills as a group and suggestions for improvement were given to individuals in the group.

3. After the skills were practiced by the group, each person performed the exercises for the purpose of evaluation.

4. When each person performed the exercises adequately the group was dismissed.

Individual instruction followed the same plan as group instruction except that the patients practiced the exercises in their own rooms. Audiovisual materials were utilized for all patients to ensure consistency of instruction.

Results of the study indicated that group preoperative teaching was as effective as individual preoperative teaching in terms of postoperative ventilatory function, length of hospital stay, and number of analgesics administered postoperatively.

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[12]Carol A. Lindemann, "Nursing Intervention with the Presurgical Patient," Nursing Research, May-June 1972, pp. 196-209.

There was a shorter span of time required for learning by patients who were taught in the group than by patients who had individual instruction.

Fortin[13] reported the results of a randomized trial designed to test the effects of preoperative patient education on postoperative functioning.

Results of the study indicated that the patients who participated in the patient education program exhibited superior physical functioning in the immediate postoperative period and during 33 postoperative days. There was a significant difference between the experimental and control groups in this area.

During the first twenty-four hours after surgery there was no difference in the amount of analgesics utilized by the patients in the control and experimental groups. There was a statistically significant reduction in the use of IM analgesics by the patients in the experimental group over the first seventy-two hours after surgery.

The patients in the experimental group appeared to experience greater physical comfort on the day following surgery. There was no significant difference in the length of hospitalization for the two groups. There was also no difference between groups in number of readmissions.

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[13]Fabienne Fortin and Suzanne Kirouac, "A Randomized Controlled Trial of Preoperative Patient Education," International Journal of Nursing Studies, Vol. 13, pp. 13-23.

Lawson[14] studied the effectiveness of the utilization of a program of self-instruction for patients in renal dialysis. Subjects for the study were randomly selected patients undergoing hemodialysis. Content centered around dietary instructions for the patients.

Videotape cassettes were chosen as the medium for instruction because it was considered to be a versatile medium. Production staff and equipment for this medium were readily available as well as playback equipment. Subjects were divided into groups. Group A consisted of patients having a tenth grade education or less. Group B patients were more highly educated. The instruction unit contained four types and self tests. The patients were given pre-tests and then the teaching unit was administered. The subjects were then given post-tests. It was found that although the scores of the less educated patients improved more than the scores of the more highly educated patients, the mean change in scores for all the patients was highly significant.

It was concluded that the method of instruction was adequate to meet the informational needs of both types of patients, but it was particularly well-suited to the needs of the educationally deprived patient.

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[14]Virginia K. Lawson, et al., "An Audiotutorial Aid for Dietary Instruction in Renal Dialysis," Journal of the American Dietetic Association, October 1976, pp. 390-396.

Records of dietary intakes for patients were examined for the pre-instructional time period and compared with similar records for the post-instructional time period. Positive behavioral changes were apparent for all patients.

Bracken[15] compared two methods of instruction for myocardial infarction patients. The two methods of instruction consisted of lecture and videotape presentation of content. The educational program was given in alternating weeks by lecture and by videotape.

It was found that patients were approximately four times more likely to refuse to attend lectures as to refuse to watch the videotapes. There was a significantly greater number of patients who completed the program given by videotape than completed the lecture series.

There was no significant difference in the scores of the younger patients who attended the lectures and the scores of the patients educated by videotape. Older patients who completed the lectures scored significantly higher on post-tests than those who completed the videotaped program, but older patients were more likely to continue to participate in the videotaped program than in the lecture series. When these variables were considered, it was found that there was

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[15]Michael B. Bracken, "Patient Education by Videotape After Myocardial Infarction: An Empirical Evaluation," Archives of Physical Medicine and Rehabilitation, May 1977, pp. 213-219.

no significant difference in educating the patient by lecture and educating the patient by videotape. The videotaped educational program had the added advantage of freeing the staff to offer care on a more individual basis. The investigator pointed out that there could be utility in group lectures because of the possible interaction between the patients in this situation.

Green[16] explored the effectiveness of presentation of patient education information through the medium of television. Films were chosen on appropriate topics and permission was obtained to reproduce the films on videotape. An instrument was developed to evaluate the learning taking place. A group of patients in a clinic waiting area were exposed to the videotaped material. Other patients were not exposed to the material and comprised the control group.

The control group had a mean score of 56.7 points while the experimental group had a mean score of 66.0 points. When this data was statistically analyzed it was found to be significant.

The mode of videotaped presentation of materials was found to be adequate to cause an increase in knowledge for health consumers. It had the added advantage of requiring

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[16]H. A. Green and Barbara J. Buchan, "The Clinic Waiting Room: Environment for Health Education Via Television," Journal of Biocommunication, August 1976, pp. 4-7.

very little personnel time, and therefore it could be utilized on a continuous basis through the day. The health consumers commented in a positive way concerning this mode of presentation of information.

The investigator concluded that the development of television as a health education medium in the clinic environment would be a fruitful subject for further investigation.

Clark[17] evaluated the use of programmed instruction for patients maintained on warfarin therapy. Content for the instruction included the following types of information: the use of the drug warfarin, the effects of the drug, and the administration of the drug.

The subjects for the study were divided into three groups. Patients in Group I received programmed instruction booklet, while Group II received a two-page handout. Group III received no printed or verbal information from the investigators.

It was found that the patients who participated in the programmed instruction scored higher on a post-test which objectively evaluated their understanding of instructions than the patients who received handouts or the patients who

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[17]Constance Mary Clark and Elizabeth Walck Bayley, "Evaluation of the Use of Programmed Instruction for Patients Maintained on Warfarin Therapy," American Journal of Public Health, August 1972, pp. 1135-1138.

received no structured instruction. Statistical analysis of data indicated a significant difference in the variance of scores of the three groups.

The investigators concluded that programmed instruction is an effective method for teaching patients about the action, indications, and effects of warfarin anticoagulant therapy. Subjects indicated that the programmed instruction was high in interest level. The investigators recommended that more programmed instructional materials be developed in order to educate patients concerning drug therapy. The investigators observed that programmed instruction had the advantage of economy of staff time.

Sechrist[18] studied the effect of repetitive teaching on the patient's knowledge about drugs to be taken at home. The investigator hypothesized that repetitive teaching about a drug to be taken at home will significantly increase the adult patient's knowledge about the drug when compared with single teaching.

Subjects were randomly assigned to a control group or an experimental group. Patients in the control group were given the information only one time, while patients in the experimental groups were given the information a second time

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[18]Karen R. Sechrist, "The Effect of Repetitive Teaching on Patient's Knowledge about Drugs To Be Taken At Home," International Journal of Nursing Studies, Vol. 16, No. 1, pp. 51-58.

approximately twenty minutes after the initial teaching. Although subjects in the control group learned some of the information, the subjects in the experimental group learned significantly more information.

It was found that one repetition was not adequate to assure complete mastery of the subject matter by all patients, as only 35% of the patients in the experimental group were able to answer all questions correctly. The experimental group did compare well with the control group, as only 12.5% of the patients in the control group were able to answer all post-test questions correctly.

The investigators observed that further study would be needed to determine the optimum number of repetitions needed to ensure complete mastery of material.

Mohammed[19] studied the ability of the adult patient to understand written health information. A test was constructed to assess comprehension of information presented on the fourth, sixth, and eighth grade reading levels. A sample of 300 patients was chosen to participate in the study. Twenty-two of the patients could not be tested because they did not know how to read, and twenty-nine of the patients could not be tested because a physical handicap prevented their reading the material. Ten patients could not read

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[19]Mary F. Bucklin Mohammed, "Patients' Understanding of Written Health Information," Nursing Research, Spring 1964, pp. 100-108.

English, although they could read a foreign language. Three of the patients appeared to be able to read the information, but could answer none of the questions about the information.

Results of the study indicate that 43% of the subjects could not profit from any written material, although the average amount of education was 6.8 school grades completed. Only 22.3% of the subjects of the study were able to read at eighth grade level or above. The investigators were unable to establish reading comprehension for 35% of the patients who refused to take the test or whose scores did not establish a definite pattern.

The investigator concluded that producers of printed health information should assess more carefully the reading comprehension of the lay population for which it is intended.

Schmitt[20] hypothesized that a group session in which patients could discuss their fear and anxiety concerning surgery would have positive effects on patient outcomes. Subjects of the study were 50 male patients admitted to the hospital for elective surgery. An experimental group and a control group were established.

Patients in the experimental group attended a group discussion session the night before surgery, and were

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[20]Florence E. Schmitt and Powhatan J. Woolridge, "Psychological Preparation of Surgical Patients," Nursing Research, March-April 1973, pp. 108-115.

encouraged to discuss their feelings with regard to their surgery. Typical topics of discussion were as follows:

1. Orientation-type information.
2. Information about the surgery.
3. Discussion of feelings about surgery.
4. Discussion about how patients could participate in their own care. Patients in the control group received nursing care which was primarily task oriented.

Results of the study indicated that stress levels of the experimental group appeared to be less than that of the control group as evidenced by lower blood pressure and slower pulse rates. Incidence of urinary retention was greater for members of the control group than for members of the experimental group. Patients in the experimental group experienced a shorter hospital stay than patients in the control group.

Crabtree[21] conducted a cost-benefit analysis to compare individual and group preoperative teaching. The benefit analysis related preoperative teaching to postoperative outcomes. Four basic factors determined calculations of the cost. They were the following: (1) Cost of nurse's time; (2) Cost of transporter's time; (3) Cost of using the classroom; and (4) Cost of equipment depreciation.

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[21]Mary Crabtree, "Application of Cost-Benefit Analysis to Clinical Nursing Practice: A Comparison of Individual and Group Pre-Operative Teaching," Journal of Nursing Administration, December 1978, pp. 11-16.

Subjects were divided into two groups. One group received instruction in a class situation, and one group received individual instruction. The study population consisted of thirty adult surgical patients having chest, abdominal, or lower abdominal procedures under general anesthesia. The two groups were matched with relation to age, site of incision, and preoperative physiological status.

The procedure for group teaching was as follows:

1. In the evening prior to surgery the patients were brought to a classroom by hospital personnel.
2. A nurse explained the purpose of the exercises, and showed a ten minute sound-on slide production which demonstrated coughing, deep breathing, and bed exercise.
3. The nurse supervised a practice session for the patients.
4. The nurse noted the amount of time spent in class.

The same procedure was followed for the individual instruction except that the patients saw the slide program and practiced the exercises in their own rooms.

There was no significant difference in individual and group teaching with regard to postoperative vital capacity and length of hospital stay. The patients taught in a group did appear to have slightly fewer postoperative respiratory complications than the patients who received individual instruction.

Cost analysis revealed that the cost of group instruction was actually slightly higher than the cost of individual instruction. The mean cost of group instruction was $2.80 per patient while the mean cost of individual instruction was only $2.56 per patient.

Haggerty[22] conducted a study designed to: (1) evaluate the relative effectiveness of two slide/tape programs for patient education; (2) determine the effect of the pharmacist's presence on the learning situation; (3) determine the attitudes of patients toward four approaches to patient education.

One of the slide/tape programs was a commercially prepared program called "Digitalis" and the other was a slide/tape program called "Digoxin Education Program." The latter program was prepared by the pharmacy department of a hospital which served as one of the locations from which the study subjects were drawn.

The total population of the study consisted of forty patients, divided into four groups. The patients in Group I viewed the commercially prepared program with the pharmacist present. The pharmacist then responded to questions from the patients and reinforced the important points in the program.

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[22]Jeanette A. Haggerty, et al., "Evaluation of Four Approaches to Teaching Patients About Digoxin," American Journal of Hospital Pharmacy, October 1978, pp. 1207-1210.

The patients in Group II viewed the commercially prepared presentation without the presence of the pharmacist. The teaching procedure for Group III was exactly the same as the procedure for Group I except that the hospital produced program was used. The teaching procedure for Group IV was exactly the same as the procedure for Group II except that the hospital produced program was used instead of the commercially prepared program.

Analysis of the data indicated that there was no significant difference in the knowledge gained by the patients in the various groups. It was concluded that the two programs were equally good, and that audiovisual materials could replace the pharmacist in the learning situation.

Hassell[23] completed a study designed to compare two methods of instruction for diabetic patients. One method consisted of the utilization of lectures to groups of patients. The other method consisted of the utilization of individual instruction.

Hassell found that both individual instruction and group instruction were effective, but group instruction was more effective than individual instruction in facilitating learning. Group instruction resulted in a significant saving of staff time.

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[23]Jean Hassell and Eva Medved, "Group/Audiovisual Instruction for Patients with Diabetes," Journal of the American Dietetic Association, May 1975, pp. 465-469.

# IV. SUMMARY

The patient education function is usually administered by the Nursing Department or the Education Department in the hospital. Administration of the patient education function has often been a responsibility of the Nursing Department for various reasons. Interest in patient education has often been centered in that department, and all the patient teaching in some institutions is done on the clinical unit by nurses. The Nursing Department is viewed in some institutions as having basic responsibility for everything that happens to a patient during hospitalization.

Equally convincing arguments have been advanced for placing the responsibility for patient education in the Education Department. Staff in the Education Department tend to have time allocated for planning, and this is usually not true for other hospital departments. Patient education is related to staff education in that staff members must be taught skills relating to implementation of educational programs. Education Department personnel have the skills necessary to plan an educational program and to supervise its implementation.

Larger institutions tend to have designated personnel in the responsible department to coordinate patient education activities. The patient education coordinator has many responsibilities. The following are some of those responsibilities:

1. Planning patient education programs and/or modifying the framework of existing programs.

2. Monitoring implementation of the patient education program, and using evaluation feedback for improving the effectiveness of the program.

3. Directing the activities performed by others in the implementation phase of the program.

4. Working with subject specialists to determine the instructional content for the program.

5. Acting as a liaison with other disciplines in the hospital in areas relating to patient education.

6. Supervising patient education staff.

7. Acting as chairperson of the Patient Education Committee.

Patient education programs are usually developed for specific patient populations, but the target population for the instruction may be the patient and/or the patient's family. Methods of instruction vary according to needs relating to specific patient populations, but results of research enable educators to draw some conclusions about the instructional process for patient education.

Structured instruction is more productive in obtaining positive patient care outcomes than unstructured instruction. It is necessary to develop a definite plan of instruction in order for patients to derive the greatest possible benefit from the patient education program.

Educators have often made the assumption that individual instruction is an ideal way to promote learning, but group instruction is sometimes superior to individual instruction in obtaining positive patient outcomes. Cost analysis of individual instruction and group instruction reveals that the cost of group instruction can be greater than cost of individual bedside instruction. Group instruction did result in a significant saving of staff time.

When circumstances permit, group instruction should be considered in implementation of a patient education program. Although it can be more costly, the benefit the patients derive from interaction with one another can justify the expenditure.

The use of mediated instruction may result in more effective instruction in several ways.

1. The utilization of audiovisual techniques can ensure consistency of instruction.

2. The use of mediated instruction can be an alternative to the use of printed material. An alternative to the use of printed material is necessary because many patients cannot benefit from the use of printed materials at all. These patients may have defective vision, be educationally deprived, or be unable to read English.

3. Most patients consider mediated instruction more interesting than written programmed instruction.

Evaluation of patient education programs was often accomplished through interview of staff and through analysis of readmission rates. Patient education outcomes was a part of nursing audit in many cases.

Barriers to the implementation of patient education such as cost, lack of facilities and resources, and lack of trained educators are frequently cited as rationale for neglect of patient education programs in hospitals.

This chapter was designed to acquaint the reader with the literature relating to patient education in hospitals. The search of the literature by the investigator revealed a lack of research pertaining to the following specific areas of patient education: (1) utilization of mediated instruction in patient education and (2) the perceptions of patient education personnel with regards to what constitutes an ideal program.

Chapter III will describe the methods and procedures used in this study.

# CHAPTER III

## METHODS AND PROCEDURES

### I. POPULATION

The population for this study consisted of patient educators in twenty East Tennessee hospitals. In order to define the study population, it was necessary to define East Tennessee. It was observed that the East Tennessee Development District encompassed the following counties: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, and Union. The East Tennessee Development District is a coalition of local governments in the East Tennessee area. The area encompassed by the East Tennessee Development District was congruent with the area encompassed by the Coordinated Hospital Services with only one exception. This exception was the area surrounding Woods Memorial Hospital in Etowah, Tennessee. Coordinated Hospital Services is a coalition of East Tennessee hospitals. It was decided to include the area encompassed by the East Tennessee Development District, and to include Woods Memorial Hospital in the sample.

All the hospitals involved in the study were short-term care facilities. The sample included profit and nonprofit

institutions ranging in size from 50-bed institutions to 525-bed institutions. The institutions involved in the study were the following hospitals: Blount Memorial Hospital, Claiborne County Hospital, Cocke County Memorial Hospital, East Tennessee Baptist Hospital, East Tennessee Children's Hospital, Morristown-Hamblen Hospital, Oak Ridge Hospital, St. Mary's Medical Center, Sevier County Medical Center, UT Memorial Hospital and Research Center, Park West Hospital, Jefferson Memorial Hospital, Chamberlain Memorial Hospital, Lafollette Community Hospital, Loudon County Memorial Hospital, Harriman City Hospital, Sweetwater Hospital Association, Scott County Hospital, Hawkins County Memorial Hospital, and Woods Memorial Hospital.

## II. INSTRUMENTATION

The investigator completed a search of the literature to determine whether a suitable instrument had been completed prior to the present study. It was found that three excellent studies had been completed on the subject of patient education in United States hospitals. The instruments for these studies were examined and provided a basis for the development of the instrument for the present study.

The first instrument examined was a survey instrument developed by Rosen.[1] This instrument did not gather data

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[1]Rosen, Appendix.

relative to important aspects of planning such as initial needs analysis and patient assessment. Data were not gathered relative to specific implementation procedures for patient education programs. Documentation procedures for patient education were not discussed, and information was not gathered about evaluation methods.

Another instrument examined was the questionnaire developed for the 1975 American Hospital Association[2] study. This instrument gathered complete data concerning the planning and evaluation phases of program development, but information was not gathered about teaching methods for patient education.

The third instrument examined was the questionnaire developed for the 1978 American Hospital Association[3] research project. Information was obtained concerning the use of mediated instruction in patient education, but other teaching methods were not considered.

Instructional theory and research was utilized in the development of the instrument for the present study. It was found that the Tyler-Taba model of curriculum development contained the following basic elements of instructional design:

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[2]American Hospital Association, 1975.

[3]American Hospital Association, 1978.

1. Needs analysis
2. Development of educational goals and objectives
3. Implementation of relevant teaching situations
4. Evaluation of educational program

This model provided a framework for the development of the instrument. The portion of the instrument concerning evaluation was developed utilizing Scriven's concept of formative and summative evaluation. The purpose of formative evaluation is program improvement through providing feedback to program developers. The purpose of summative evaluation is to provide information concerning the effectiveness of a given program or project.

The investigator developed a rough draft of the instrument and revised it after conferring with the doctoral committee and others concerning the internal consistency of the instrument. The instrument was then presented to three local and national experts in the area of patient education in order to determine the validity of the content of the questionnaire.

After extensive communication with these experts the investigator was then able to make revision in the following specific areas:

1. In question one the choices "Administration" and "Inservice" were added.
2. The choice "Master in Public Health" was added in question two.

3. In question thirteen the choice "Dietician" was added.

4. In question fourteen the choice "Dietician" was added.

5. In question seventeen the choice "Examine results of quiz/inventory given to patients and compile statistics" was added.

The investigator then submitted the survey instrument to two experts in the field of instructional media and technology. Changes were made in the following specific areas:

1. The choice "videotape" was deleted and the choice "videotape cassettes" and "videotape (reel to reel)" were added in question twenty.

2. The choice "16mm camera" was deleted and the choice "16mm projector" was added in question twenty-one.

The final part of the validation process consisted of submitting the questionnaire to five randomly selected patient educators in the Middle Tennessee and West Tennessee areas. This population was selected because it was very similar to the study population in locality and size of institutions. The five patient educators were chosen from the Guide to the Health Care Field.[4] The patient educators

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[4]American Hospital Association, Guide to the Health Care Field, (Chicago, American Hospital Association, 1979).

were asked to complete the questionnaire, and comment on the amount of time required for this task. They were also asked to comment on the degree to which the questionnaire covered all aspects of patient education in hospitals. All five of the patient educators agreed that the instrument did cover all aspects of patient education in hospitals.

In order to reduce the frequency of the utilization of the category "Other" it was necessary to make the following changes:

1. In questions thirteen and fourteen the choice "Pharmacist" was added.

2. In question seventeen the choice "No evaluation process" was added.

3. In questions thirty and thirty-one the choice "Quality Control Committee" was added.

This investigator's survey instrument was developed to gather data in the following major areas of patient education:

1. Identification of patient education programs in East Tennessee hospitals.

2. Identification of levels of responsibility for patient education programs.

3. Identification of planning procedures for patient education programs.

4. Identification of teaching methods utilized for patient education programs.

5. Examination of the utilization of media in patient education programs.

6. Examination of assessment and evaluation procedures for patient education programs.

## III. SURVEY DISTRIBUTION

The instrument was distributed to twenty patient educators in East Tennessee hospitals. These educators were identified through their work on the Education Task Force of Coordinated Hospital Services and the Area Patient Education Committee, an organization of patient educators in the East Tennessee area.

The instruments were mailed to the educators on May 24, 1980. After a period of two weeks, telephone inquiries were initiated to obtain further response. A final response rate of 100 percent was obtained.

## IV. ANALYSIS OF DATA

Since the study population was small, it was possible to analyze the data without the use of a computer. The data were presented in whole numbers designating frequency of response and percentages.

The data resulting from the survey and the information derived from the review of the literature served as a basis for the development of guidelines for the implementation of more effective patient education programs in East Tennessee hospitals.

## V. SUMMARY

This chapter presented a description of the procedures used in the study. The procedures included the following:

1. The construction of the questionnaire.
2. The sample selection of the survey instrument.
3. The data collection.

Chapter IV will contain a description and analysis of the data.

# CHAPTER IV

## ANALYSIS OF DATA

### I. INTRODUCTION

The purpose of this chapter is to present data collected to fulfill the research objectives of this investigation.

1. Identification of levels of administrative responsibility for patient education programs in East Tennessee hospitals.

2. Identification of types of patient education programs in East Tennessee hospitals.

3. Identification of planning procedures for patient education programs.

4. Examination of implementation procedures for patient education programs and barriers to the implementation of the programs.

5. Examination of the utilization of media in patient education programs.

6. Examinations of assessment and evaluation procedures for patient education programs.

The questionnaire was distributed to patient educators in twenty East Tennessee hospitals. This sample represented 100% of the hospitals in the East Tennessee area as defined

by the area encompassed by the East Tennessee Development district. Eighteen of the hospitals were short-term, general, nonprofit institutions varying in size from a 50-bed hospital to a 525-bed hospital. One institution was a short-term, nonprofit, pediatric institution and one hospital was a general, short-term, profit institution.

## II. QUESTIONNAIRE RESPONSES

### Titles of Respondents

The respondents were asked to designate their specific titles. The data are presented in Table I.

TABLE I. TITLES OF RESPONDENTS

| Title | Frequency | Percentage |
|---|---|---|
| Inservice Education Coordinator | 6 | 30 |
| Patient Education Coordinator | 3 | 15 |
| Director Staff Development and Training | 3 | 15 |
| Education Coordinator | 3 | 15 |
| Staff Development Coordinator | 1 | 5 |
| Director of Inservice Education | 1 | 5 |
| Director of Social Services | 1 | 5 |
| Clinical Specialist | 1 | 5 |
| Child Life Coordinator | 1 | 5 |

Although nine different titles were given, 30% of the respondents were Inservice Education Coordinators, 15% of the respondents were Directors of Staff Development and Training, and 15% of the respondents were Education Coordinators. This would indicate that continuing education

personnel are frequently given the responsibility of developing patient education programs. Child Life Coordinator is the title given to a health educator in a hospital for children.

Titles of Immediate Supervisors of Respondents

The respondents were asked to designate the titles of their immediate supervisors. This information is important because it would be an indicator of the levels of administrative responsibility for the patient education function in the hospital. The data are presented in Table II.

TABLE II. JOB TITLES OF IMMEDIATE SUPERVISORS OF RESPONDENTS

| Title | Frequency | Percentage |
|---|---|---|
| Director of Nursing | 11 | 55 |
| Director of Inservice Education | 2 | 10 |
| Hospital Administrator | 2 | 10 |
| Director of Hospital Education | 1 | 5 |
| Vice President Patient Care Services | 1 | 5 |
| Director Fiscal Services | 1 | 5 |
| Assistant Hospital Administrator | 1 | 5 |
| Director of Staff Development | 1 | 5 |

Most of the respondents had a direct line relationship with the Director of Nursing. In these hospitals the patient education function is almost completely the responsibility of the Director of Nursing Service.

Departments Responsible for Patient Education

Respondents were asked to designate names of departments in which they are employed. The data are presented in Table III.

TABLE III. HOSPITAL DEPARTMENTS RESPONSIBLE FOR PATIENT EDUCATION

| Department | | Frequency | Percentage |
|---|---|---|---|
| Nursing | | | |
| Administration | 3 | | |
| Inservice Education | 8 | 11 | 55 |
| Education | | 4 | 20 |
| Administration | | 2 | 10 |
| Social Services | | 1 | 5 |
| Child Life | | 1 | 5 |
| No Response | | 1 | 5 |

A total of 55% of the respondents were employed in the Nursing Department. This underscores the importance of the Nursing Department in administration of patient education in East Tennessee hospitals. One respondent was employed in the Social Services Department. It is not unusual for social services personnel to do patient teaching. The respondents were employed in the Education Department in 20% of the cases. The Education Departments are not playing as active a role in development of patient education programs as Nursing Departments. The Child Life Department is a

department which develops education programs for pediatric patients.

Educational Preparation of Respondents

Information was obtained from respondents concerning their educational preparation. Data obtained in this area are presented in Table IV.

TABLE IV. EDUCATIONAL PREPARATION OF RESPONDENTS

| Degree/Diploma | Frequency | Percentage |
|---|---|---|
| Diploma in Nursing | 7 | 35 |
| M.S. in Nursing | 3 | 15 |
| Associate Degree in Nursing | 2 | 10 |
| Diploma in Nursing and B.S. in Education | 2 | 10 |
| B.S. in Nursing | 1 | 5 |
| Diploma in Nursing and M.S. in Education | 1 | 5 |
| M.S. in Education | 1 | 5 |
| M.S. in Social Work | 1 | 5 |
| No response | 2 | 10 |

Most of the respondents had some background in nursing, the largest group having a diploma in nursing. This is due to the fact that there are several diploma schools of nursing in East Tennessee, but only in the past eight years has it been possible to get a baccalaureate degree in nursing from a local university. Only one of the respondents had

graduate level preparation in nursing. Associate degree preparation in nursing is a two-year program and the diploma preparation in nursing is a three-year program. Graduates of diploma schools who wished to obtain university degrees have often obtained degrees in the field of education. This applies to 15% of the respondents, as 10% of the respondents have the combination of a Diploma in Nursing and a B.S. in Education and 5% of the respondents have the combination of a Diploma in Nursing and an M.S. in Education.

The respondents were asked to indicate the ideal educational preparation for persons in their positions in the hospital organizations. The data are presented in Table V.

TABLE V. IDEAL EDUCATIONAL PREPARATION FOR RESPONDENTS

| Degree/Diploma | Frequency | Percentage |
|---|---|---|
| Diploma in Nursing and B.S. in Education | 4 | 20 |
| M.S. in Education | 3 | 15 |
| B.S. in Nursing and B.S. in Education | 2 | 10 |
| B.S. in Nursing and M.S. in Education | 2 | 10 |
| M.S. in Nursing and M.S. in Education | 2 | 10 |
| M.S. in Nursing | 2 | 10 |
| B.S. in Nursing | 1 | 5 |
| B.S. in Education | 1 | 5 |
| B.S. in Psychology | 1 | 5 |
| No response | 2 | 10 |

A total of 70% of the respondents thought it would be desirable to have some educational preparation in the field of education, while a total of 65% of the respondents thought it would be desirable to have some educational preparation in the field of nursing. A combination of degrees in both fields was considered desirable by 50% of the respondents.

A comparison of the actual and the ideal educational preparation of the respondents is presented in Table VI.

TABLE VI. COMPARISON OF ACTUAL AND IDEAL EDUCATIONAL PREPARATION OF RESPONDENTS

| Degree/Diploma | Frequency $P_1$ | Frequency $P_2$ |
|---|---|---|
| Diploma in Nursing | 7 | 0 |
| Associate Degree in Nursing | 2 | 0 |
| M.S. in Social Work | 1 | 0 |
| B.S. in Nursing | 1 | 1 |
| Diploma in Nursing and M.S. in Education | 1 | 1 |
| M.S. in Nursing | 3 | 2 |
| M.S. in Education | 1 | 3 |
| Diploma in Nursing and B.S. in Education | 2 | 4 |
| B.A. in Psychology | 0 | 1 |
| B.S. in Nursing and B.S. in Education | 0 | 2 |
| B.S. in Nursing and M.S. in Education | 0 | 2 |
| M.S. in Nursing and M.S. in Education | 0 | 2 |
| No response | 2 | 2 |

$P_1$ = Actual Educational Preparation of Respondents
$P_2$ = Ideal Educational Preparation of Respondents.

Most of the respondents thought they should have more advanced educational preparation than actually was the case. Although none of the respondents had the combination of a B.S. in Nursing and a B.S. in Education, two respondents thought this combination would be desirable educational preparation. The same is true for the combination of the B.S. in Nursing and M.S. in Education. Although seven of the respondents had a Diploma in Nursing, no respondent thought the diploma was ideal preparation alone. One respondent thought the Diploma in Nursing was ideal if combined with an M.S. in Education. The respondents did not think the Associate Degree in Nursing to be adequate preparation for a health educator. One respondent did not answer the questions because she was not designated to coordinate patient education programs. There was no person in the institution designated to perform that function.

## Staff Time Allotted to Patient Education

Respondents were asked to estimate the percentage of their time spent in patient education activities. Only two of the respondents were full-time patient educators. This is due in part to the fact that continuing education personnel are "doubling" as patient educators. In one of the hospitals there were various people planning patient education activities, but no one person is designated to

have the responsibility for planning patient education programs. In two cases the respondents were supervisors of personnel who engage in patient education activities on a full-time basis.

Patient Education Budget

Four of the twenty hospitals in the study had a patient education budget. Items included in the budget were the following: (a) personnel salaries, (b) printed materials, (c) audiovisual materials, and (d) audiovisual equipment. Sixteen of the hospitals reported having no patient education budget. The funds for patient education in these hospitals are taken from the budgets of various hospital departments.

Patient Education Committee

Six hospitals reported the existence of a patient education committee to make decisions relating to policy in patient education programs. It is interesting to note that fourteen of the hospitals did not have a Patient Education Committee. Names for these committees are presented in Table VII.

Types of professional personnel who were members of the Patient Education Committee are shown in Table VIII.

Physicians and nurses were most often members of the patient education committee. Administrators and hospital educators were also active on the committee. Dieticians,

pharmacists, physical therapists, and respiratory therapists participated less often in work on the committee than physicians and nurses. There were no patient representatives on the committee.

TABLE VII. NAMES OF PATIENT EDUCATION COMMITTEES

| Name of Committee | Frequency |
|---|---|
| Patient Education Committee | 3 |
| Patient Education Communication Committee | 1 |
| Medical Education Committee | 1 |
| Medical-Nursing Liaison Committee | 1 |

TABLE VIII. MEMBERSHIP ON PATIENT EDUCATION COMMITTEE

| Types of Personnel | Frequency |
|---|---|
| Physician | 6 |
| Registered nurse | 6 |
| Administrator | 4 |
| Educator | 4 |

## Leadership in Patient Education Programs

Respondents were asked to indicate titles of personnel in leadership positions in the planning, implementation and

evaluation of patient education programs. The data are presented in Table IX from eighteen of the twenty hospitals.

TABLE IX. TITLES OF PROFESSIONAL PERSONNEL DIRECTING PATIENT EDUCATION PROGRAMS

| Titles | Frequency |
|---|---|
| Director of Education | 11 |
| Director of Nursing | 3 |
| Patient Education Coordinator | 3 |
| Child Life Coordinator | 1 |

Eight of the Directors of Education are actually continuing education personnel in the Nursing Department. When this fact is considered it is obvious that the Nursing Department is the most active department in patient education leadership.

Respondents were asked to indicate types of personnel who would assume leadership positions in ideal patient education programs. Information from the eighteen respondents are presented in Table X.

TABLE X. TITLES OF PROFESSIONAL PERSONNEL DIRECTING IDEAL PATIENT EDUCATION PROGRAMS

| Titles | Frequency |
|---|---|
| Patient Education Coordinator | 14 |
| Director of Education | 3 |
| Child Life Coordinator | 1 |
| No response | 2 |

Respondents thought a Patient Education Coordinator should assume the leadership position in patient education programs. Only three of the respondents thought that the Director of Education should direct the planning, implementation and evaluation of patient education programs in hospitals. The Child Life Coordinator has a function similar to the Patient Education Coordinator.

A comparison was made between types of personnel in leadership positions in actual and ideal patient education programs. These comparisons are shown in Table XI.

TABLE XI. A COMPARISON OF THE TITLES OF PERSONNEL DIRECTING PATIENT EDUCATION IN ACTUAL AND IDEAL PROGRAMS

| Titles | Frequency $R_1$ | Frequency $R_2$ |
|---|---|---|
| Director of Education | 11 | 3 |
| Director of Nursing | 3 | 0 |
| Patient Education Coordinator | 3 | 14 |
| Child Life Coordinator | 1 | 1 |
| No response | 2 | 2 |

$R_1$ = Frequency for Actual Program
$R_2$ = Frequency for Ideal Program.

It is interesting to note that although the Patient Education Coordinator is directing patient education programs in only three cases, fourteen respondents thought this

position to be the ideal leadership position for patient education programs. The Director of Education was assuming the leadership position in eleven of the cases but only three of the respondents thought this type of personnel should assume the leadership position.

Needs Assessment

Respondents were asked to indicate techniques for data collection concerning types of patient education programs which are needed in the institution. Their responses are presented in Table XII.

TABLE XII. TECHNIQUES FOR OBTAINING NEEDS ASSESSMENT DATA

| Technique | Rank 1 | 2 | 3 | 4 | Average Rank* |
|---|---|---|---|---|---|
| Interview nurses | 10 | 6 | 2 | | 1.56 |
| Interview physicians | 4 | 5 | 3 | 4 | 2.21 |
| Interview patients | 2 | 2 | 5 | 4 | 2.85 |
| Obtain Information from Medical Records | 2 | | 5 | 5 | 3.08 |

*Items are ranked according to importance, number one being the most important.

The respondents indicated that data were collected most often utilizing interview of nurses and physicians. Data were obtained least often from examination of medical records

to determine types of admissions. One respondent indicated that the Audit Committee was a good source of information for needs assessment. In a few hospitals effort was being made to obtain data from the patients.

## Assessment Techniques for Patient Education Programs

Respondents were asked to indicate procedures utilized by their respective hospitals for assessment of patient education programs before the programs are given final approval for use on a regular basis. Nineteen respondents reported assessment techniques utilized in their respective institutions as presented in Table XIII.

TABLE XIII. ASSESSMENT TECHNIQUES FOR PATIENT EDUCATION PROGRAMS

| Technique | Frequency |
|---|---|
| Physicians assess program | 13 |
| Nurses assess program | 10 |
| Hospital subject specialists assess program | 6 |
| Test program on one unit for several weeks | 4 |

The physicians appear to be important in the approval process. Nurses also have a great deal of input into whether a program is approved for use. It is significant

that testing on the clinical unit is the least often utilized form of assessment.

Types of Inpatient Education Programs

Patient education programs are usually planned for specific patient populations. Twenty of the respondents completed the question. The data relating to the most frequently reported inpatient education programs for specific patient populations are presented in Table XIV.

TABLE XIV. TYPES OF INPATIENT EDUCATION PROGRAMS FOR SPECIFIC PATIENT POPULATIONS

| Type of Program | In Planning Stages | In Operation | Total Frequency |
|---|---|---|---|
| Diabetes | 5 | 8 | 13 |
| Preoperative | 2 | 10 | 12 |
| Diet | | 11 | 11 |
| Heart Attack | | 11 | 11 |
| Orientation to Hospital | 1 | 7 | 8 |
| Hypertension | | 8 | 8 |
| Ostomy | | 8 | 8 |

The most frequently offered inpatient education program was for Diabetes patients. This may be due to the following factors:

1. Diabetes is a relatively common illness.

2. Positive treatment outcomes for the illness are dependent to a great extent upon the degree to which the

patient is able to learn techniques for self-care. The same factors are operative in the decision to offer programs for victims of heart attack, hypertension, and ostomy surgery. Orientation to the hospital is useful for patients in every hospital, and is a frequently offered program. Programs concerning diet are needed for patients who are victims of Diabetes, Heart Attack, Hypertension, and Obesity.

Other types of inpatient education programs offered by East Tennessee hospitals are related to the following areas: (1) Mastectomy, (2) Diagnostic tests, (3) Arthritis, (4) Congestive Heart Failure, and (5) Respiratory Illness.

Table XV shows the most frequently utilized instructional educational programs for specific outpatient populations. Data were collected from twenty respondents.

TABLE XV. TYPES OF EDUCATION PROGRAMS FOR SPECIFIC OUTPATIENT POPULATIONS

| Type of Program | In Planning Stages | In Operation | Total Frequency |
|---|---|---|---|
| Diabetes | 1 | 6 | 7 |
| Prenatal | | 5 | 5 |
| Heart Attack | | 4 | 4 |
| Death and Dying | | 4 | 4 |
| Hypertension | | 4 | 4 |

The most frequently offered educational program for outpatient populations was for Diabetes patients. This is

probably due to the fact that diabetes patients usually require continuing counselling with regard to diet and treatment. Heart attack victims and hypertension patients require similar counselling. Families of dying patients usually require counselling in a continuing basis. Prenatal patients comprise a relatively large portion of the outpatient population. These patients benefit from orientation concerning procedures utilized in the hospital for obstetrical patients.

Other programs offered for outpatient populations are related to the following areas: (1) alcohol and drug dependency, (2) kidney related problems, and (3) illnesses related to vision or hearing.

## Personnel Responsible for Direct Teaching

Respondents were asked to identify types of personnel responsible for direct teaching in patient education programs. There were twenty responses to this question, and the data are presented in Table XVI.

The patient's nurse is responsible for most of the direct teaching in patient education programs. The Patient Education Coordinator is responsible for direct teaching in patient education programs, but the dietician and pharmacist are viewed as support staff in patient teaching.

TABLE XVI. PERSONNEL RESPONSIBLE FOR DIRECT TEACHING IN PATIENT EDUCATION PROGRAMS

| Type of Personnel | Rank 1 | 2 | 3 | 4 | Average Rank* |
|---|---|---|---|---|---|
| Patient's nurse | 18 | 1 | 1 | | 1.15 |
| Dietician | 1 | 12 | 2 | | 2.07 |
| Patient Education Coordinator | 1 | 1 | 1 | | 2.00 |
| Pharmacist | | 1 | | 22 | 3.33 |

*Items are ranked according to importance, number one being the most important item.

The respondents were asked to indicate the personnel who would be responsible for direct teaching in an ideal patient education program. There were nineteen responses to this question. The data are presented in Table XVII. The respondents ranked the data according to importance of the item in the category. Number one was to be the most important item.

The patient's nurse was considered to be the type of personnel who would most frequently be responsible for direct teaching in ideal patient education programs. The Patient Education Coordinator, dietician and pharmacist are support staff in ideal patient education programs.

A comparison was made between types of personnel responsible for direct teaching in actual and ideal patient education programs. The data are presented in Table XVIII.

TABLE XVII. PERSONNEL RESPONSIBLE FOR DIRECT TEACHING IN AN IDEAL PATIENT EDUCATION PROGRAM

| Type of Personnel | Rank 1 | 2 | 3 | 4 | Average Rank* |
|---|---|---|---|---|---|
| Patient's nurse | 14 | 5 | 1 | | 1.25 |
| Patient Education Coordinator | 6 | 2 | 4 | 1 | 2.00 |
| Dietician | | 8 | 5 | 2 | 2.60 |
| Pharmacist | | | 2 | 6 | 3.75 |

*Items are ranked according to importance, number one being the most important item.

TABLE XVIII. A COMPARISON OF PERSONNEL RESPONSIBLE FOR DIRECT TEACHING IN ACTUAL AND IDEAL PATIENT EDUCATION PROGRAMS

| Type of Personnel | Average Rank Actual Program | Average Rank Ideal Program |
|---|---|---|
| Patient's nurse | 1.15 | 1.25 |
| Patient Education Coordinator | 2.00 | 2.00 |
| Dietician | 2.07 | 2.60 |
| Pharmacist | 3.33 | 3.75 |

The patient's nurse was the type of personnel who would be responsible for direct teaching in an actual and an ideal patient education program. The dietician was not considered as important in the ideal program as in the

actual program. The patient education coordinator participated in direct teaching to a greater extent in the ideal program than in the actual program.

Documentation for Patient Education

The Joint Commission for the Accreditation of Hospitals suggests that all patient teaching be documented. Eighteen of the educators responded to this question, and the data are presented in Table XIX.

TABLE XIX. DOCUMENTATION PROCEDURES FOR PATIENT EDUCATION

| Documentation Procedures | Frequency | Rank |
|---|---|---|
| Notation on the patient's chart | 17 | 1 |
| Notation on Kardex | 8 | 2 |
| Notation on Patient Education Documentation Sheet | 1 | 3 |
| Notation on Nursing Assessment Form | 1 | 4 |
| No response | 2 | |

The most frequently employed documentation procedure was the utilization of a notation on the patient's chart. In some institutions an area is designated on the chart for documentation of patient education activities. A checklist is sometimes placed on the chart for the documentation of important aspects of the teaching experience. The notation is sometimes placed on the Kardex and later transferred to the medical record.

Techniques for Evaluation of Learning

Personnel doing direct patient teaching must receive some feedback from patients in order to determine whether the patient acquired the needed information. Nineteen of the respondents answered this question and the data are presented in Table XX.

TABLE XX. TECHNIQUES FOR EVALUATION OF LEARNING

| Techniques | Frequency | Rank |
|---|---|---|
| Interview patient | 16 | 1 |
| Patient educator observes behavioral changes in patient | 14 | 2 |
| Other health professionals observe behavioral changes in patient | 8 | 3 |
| Administer quiz/inventory to patient | 6 | 4 |
| Observation of return demonstration of patient | 2 | 5 |
| Family of patient observes behavioral changes in patient | 1 | 6 |
| No evaluation | 1 | |
| No response | 1 | |

Most of the respondents indicated that the evaluation of the learning taking place was accomplished through the interview of the patient. Another often utilized method was the observation of behavioral changes in the patient by health professionals. The respondents indicated that

seldom was the evaluation accomplished through the utilization of tests or inventories administered to the patient.

Evaluation Techniques

Respondents were asked to indicate techniques for data collection for evaluation of patient education programs. Thirteen hospitals responded to this question. Data are presented in Table XXI.

TABLE XXI. EVALUATION TECHNIQUES FOR PATIENT EDUCATION PROGRAMS

| Techniques | Frequency |
|---|---|
| Interview selected patients | 8 |
| Examine patient records for evidence of behavioral change | 7 |
| Examine results of quiz/inventory | 6 |
| No evaluation | 7 |

The most frequently utilized procedure for data collection consisted of interviewing selected patients. Medical records were also examined for evidence of behavioral change in patients. The procedure utilized least often is the examination of the results of inventories or quizzes administered to patients. The procedure is not often utilized because patients are not often administered

written quizzes for evaluation. This evaluation technique may be considered as threatening to the patient and requires more staff time than other evaluation techniques.

Seven of the hospitals did not evaluate patient education programs.

Methods of Instruction

Respondents were asked to indicate methods of instruction for patient education programs. Twenty hosptials responded to this question. The data are presented in Table XXII.

TABLE XXII. METHODS OF INSTRUCTION FOR PATIENT EDUCATION PROGRAMS

| Methods | Rank 1 | 2 | 3 | 4 | 5 | Average Rank* |
|---|---|---|---|---|---|---|
| Verbal information given to patient | 6 | 4 | 5 | 1 | 1 | 2.24 |
| Demonstration | 7 | 5 | 1 | 1 | 3 | 2.29 |
| Printed materials given to patient | 4 | 7 | 5 | 1 | 2 | 2.47 |
| Audiovisual materials utilized with verbal information | 3 | 1 | 6 | 2 | 0 | 2.58 |
| Audiovisual materials utilized alone | 0 | 1 | 0 | 1 | 2 | 3.00 |
| Audiovisual materials utilized with printed materials | 0 | 2 | 1 | 6 | 2 | 3.73 |

*Items are ranked according to importance, number one being the most important item.

The method of instruction utilized most often for patient education consisted of simply giving verbal information to the patient. Demonstration was often utilized in teaching the patients skill in self-care. Audiovisual materials were utilized alone or in conjunction with verbal information. These materials were not often utilized in conjunction with printed materials.

Respondents were asked to indicate the audiovisual materials directly utilized for patient education instruction. Seventeen hospitals responded to this question and their responses are presented in Table XXIII.

TABLE XXIII. AUDIOVISUAL MATERIALS UTILIZED FOR PATIENT EDUCATION

| Audiovisual Materials | Rank 1 | 2 | 3 | 4 | 5 | Average Rank |
|---|---|---|---|---|---|---|
| Videotape Cassettes | 6 | 1 | 1 | | 2 | 2.10 |
| Pictures/Charts | 4 | 3 | | 2 | 1 | 2.30 |
| Filmstrips | 1 | 4 | 3 | 3 | | 2.73 |
| Slides | 1 | 4 | 3 | 3 | | 2.73 |
| Audiotapes | 1 | 1 | 3 | 1 | 1 | 3.00 |
| Transparencies | | | 1 | | | 3.00 |
| Models | 2 | | 1 | 3 | 3 | 3.56 |
| 16mm Film | | 1 | 1 | 2 | 1 | 3.60 |

Videotape cassettes are the most frequently utilized type of media for patient education. Information on videotape can be easily distributed to patient care areas

through the utilization of a closed circuit television system. Ease of production and the fact that videotape can show motion are other advantages to the use of this medium in patient education. Pictures and charts are often utilized because they are relatively inexpensive to purchase and they can be used at the patient's bedside. The same is true for slides, models and transparencies. The type of audiovisual material utilized least often for patient education is 16mm film. Equipment for utilization of this type of material is not easily utilized at the bedside. Three hospitals do not utilize audiovisual materials for patient education.

Respondents were asked to indicate the type of audiovisual equipment owned by their respective institutions. Seventeen hospitals responded to this question, and their responses are presented in Table XXIV.

Audiotape recorders are often purchased for utilization in the hospital because audiotape production requires little knowledge or skill. Videotape cassette players and recorders are often purchased for production and distribution of materials by closed circuit television. Hospitals often utilize videotape players for distribution of commercially produced materials, and do not own the means for production of videotape. For this reason more videotape players are purchased than videotape recorders. Other frequently purchased types of equipment are supportive of basic types

of media often utilized for patient education. Although 16mm projectors are often purchased by hospitals, they are not often actually utilized in patient education programs.

Three hospitals do not utilize audiovisual equipment for patient education.

TABLE XXIV. AUDIOVISUAL EQUIPMENT PURCHASED BY EAST TENNESSEE HOSPITALS FOR PATIENT EDUCATION PROGRAMS

| Audiovisual Equipment | Frequency |
|---|---|
| Audiotape Recorders | 17 |
| cassette 15 | |
| reel to reel 2 | |
| Videotape Cassette Player | 16 |
| Slide Projector | 14 |
| Videotape Cassette Recorder | 13 |
| Transparency Maker | 11 |
| Filmstrip Projector | 11 |
| 16mm Projector | 9 |
| Television Camera | 7 |
| 35mm Camera | 7 |
| Opaque Projector | 6 |
| Overhead Projector | 4 |
| Do not utilize Audiovisual Equipment | 3 |

Six hospitals reported using external television facilities for production of patient education programs. Data concerning the types of facilities utilized by the hospitals for television production are presented in Table XXV.

TABLE XXV. TYPES OF EXTERNAL TELEVISION FACILITIES USED IN PRODUCTION OF PATIENT EDUCATION PROGRAMS

| Type of External Facility | Frequency |
|---|---|
| Studio of a local college or university | 3 |
| Studio of a local television station | 2 |
| Studio of a local high school | 1 |
| No use of external facilities | 14 |

The most frequently utilized external television production facility was the studio of a local institution of higher education. Fourteen of the hospitals did not have access to external production facilities.

Four hospitals owned closed circuit television systems. One hospital was unable to utilize the system because of construction. One hospital owned a system which included the following components: (1) videotape players, (2) television receivers, (3) switcher, (4) modulator, and (5) programmer. Three hospitals owned systems which simply consisted of television receivers and videotape players. One hospital owned a system which consisted of videotape players, television receiver, and a timer.

Three of the twenty hospitals reported having a media specialist on the staff. Two of these media specialists were employed on a full-time basis, and the third was a

part-time employee working forty hours per month. Names of departments employing the media specialists and the professional titles of the media professionals are presented in Table XXVI.

TABLE XXVI. DEPARTMENTS EMPLOYING MEDIA SPECIALISTS AND TITLES OF MEDIA SPECIALISTS

| Departments | Titles |
|---|---|
| Hospital Education | Media Technician |
| Education | Inservice Education Coordinator |
| Staff Development | Media Producer |

One of the media specialists was not involved in patient education activities. One media specialist was engaged in patient education activities for 50% of his time, and the other was engaged in patient education activities for 25% of his total time at the hospital. All of the media specialists were employed in education-related departments. Media services did not have departmental status in any of the hospitals.

## Types of Evaluation Personnel

Respondents were asked to indicate personnel responsible for the evaluation of patient education programs. Thirteen

hospitals responded to this question. The data are presented in Table XXVII.

TABLE XXVII. TYPES OF EVALUATION PERSONNEL IN ACTUAL AND IDEAL PATIENT EDUCATION PROGRAMS

| Type of Personnel | Frequency | Ideal |
|---|---|---|
| Audit Committee | 5 | 4 |
| Patient Education Coordinator | 4 | 4 |
| Quality Control Committee | 1 | 3 |
| Patient Education Committee | 1 | 8 |
| Medical Staff | 1 | 0 |
| Administrator | 1 | 0 |
| No evaluation | 7 | |

The audit committee, a nursing service committee designed to study treatment outcomes evaluated patient education programs most frequently. The Patient Education Coordinator also was frequently responsible for evaluation of patient education programs. The Quality Control Committee evaluated patient education programs. This committee examines quality of care in the institution. The medical and administrative staff had some responsibility in the evaluation of patient education programs.

The patient education committee was more active in evaluation of the ideal program than it was in the evaluation of the actual program.

Nineteen hospitals provided information regarding implementation barriers to successful patient education programs. Analysis of that data is presented in Table XXVIII.

TABLE XXVIII. BARRIERS TO IMPLEMENTATION OF PATIENT EDUCATION PROGRAMS

| Barriers | Rank 1 | 2 | 3 | 4 | 5 | Average Rank* |
|---|---|---|---|---|---|---|
| Lack of funds for personnel | 4 | 3 | 1 | 1 | | 1.89 |
| Lack of physician cooperation | 3 | 3 | 1 | | 1 | 2.13 |
| Lack of funds for materials | 3 | 2 | 2 | 1 | 1 | 2.44 |
| Lack of work space for personnel | 1 | 5 | 1 | 2 | | 2.44 |
| Lack of time for nursing staff | 4 | 1 | 2 | 2 | 1 | 2.50 |
| Lack of planning for the future | 1 | 1 | 2 | 2 | | 2.83 |
| Lack of patient cooperation | | | 1 | | | 3.00 |
| Lack of accessibility of equipment | | 1 | | 3 | 5 | 4.33 |

*Items are ranked according to importance, number one being greatest barrier to implementation of patient education.

Barriers to implementation of patient education programs are often related to lack of funds for patient education, and lack of adequate physical facilities. Lack of support from administrative and medical staff with regard

to implementation of patient education programs is an important barrier to the development of the programs.

Barriers to implementation of patient education which were written in the "other" category were the following:

1. Nursing staff members do not have teaching expertise.
2. Lack of administrative support and approval.
3. Lack of commitment on the part of nursing administration.

Respondents were asked to indicate whether the audiovisual materials utilized for patient education were commercially produced or produced by the hospital in which they are used. Eighteen hospitals responded to this question.

Five of the hospitals purchased 100% of the audiovisual materials utilized for patient education from commercial sources. Eight of the hospitals obtained 75% of the audiovisual materials from commercial sources, and four hospitals obtained 50% of the materials from commercial sources. One hospital obtained 25% of the audiovisual materials utilized for patient education from commercial sources. No hospital reported producing internally all the audiovisual materials utilized for patient education, although one hospital reported producing 75% of the materials.

The respondents were asked to indicate from what location in the hospital audiovisual materials and equipment were obtained for utilization. Fourteen of the respondents indicated that these materials and equipment could be obtained from the Education Department. Two of the respondents indicated that these materials were obtained from the library and one of the respondents indicated that audiovisual equipment and materials were obtained from an Audiovisual Department.

Respondents were asked to identify specific changes which would ensure more nearly ideal patient education programs in the hospitals. Many situations which were identified as requiring change were similar to those discussed earlier as barriers to implementation of effective patient education programs.

The change most frequently identified as desirable was the addition to the staff of a full-time patient educator. Other staff members do not have the time to develop complete patient education programs.

Another desirable change was the allocation of funds for patient education, and having a separate budget for it. Funds for patient education are sometimes taken from funds originally allocated for other education-related functions, and this is not an effective budgeting practice.

Respondents identified a need to evaluate the results of the teaching experience. This data are important to determine whether it is necessary to reteach certain items, and to provide input for formative evaluation.

Respondents voiced a need for more long range planning, and for more involvement of nurses in subject specialists in the development of patient education programs.

A patient education committee to set policy for patient education programs was seen as an important addition to hospital committee structure.

Respondents identified a need for more administrative support of patient education, and others found it necessary to change the philosophy of the medical staff regarding patient education. The physicians argue they should alone decide what the patients should know, and that giving the patient too much information will cause the patient to worry needlessly and to develop more symptoms.

One respondent wished to redesign the physical facilities so that there will be enough room to develop materials for patient education.

Changes in the hospital environment and organization which would ensure more nearly ideal patient education programs include:

1. Addition of a patient education specialist to the staff.

2. Allocation of funds for patient education.
3. Evaluation of the results of the teaching experience.
4. Long-range planning.
5. Addition of Patient Education Committee to committee structure.
6. Administrative support for patient education.
7. Medical staff support for patient education.
8. More spacious facilities.

## III. SELECTED COMPARATIVE DATA

The 1975 American Hospital Association study of inpatient education gathered data relative to types of programs for specific patient populations existing in United States hospitals. This data are compared with data from the present study in Table XXIX.

TABLE XXIX. INPATIENT PROGRAMS FOR SPECIFIC PATIENT POPULATIONS

| Type of Program | Rank Present Study | Rank AHA Study |
|---|---|---|
| Diabetes | 1 | 1 |
| Preoperative | 2 | 10 |
| Diet/Nutrition | 3 | 2 |
| Heart Attack | 4 | 6 |
| Orientation to hospital | 5 | * |
| Hypertension | 6 | * |
| Ostomy | 7 | 4 |

*Not listed in top ten programs in American Hospital Association study.

There was total agreement between the two studies in only one area as Diabetes programs ranked first in frequency in both studies. Many of the programs are similarly ranked in both studies. Types of programs offered would differ according to individual needs of various hospitals, but certain types of programs are usually needed in the general hospital.

Data from the present study concerning types of outpatient education programs which exist in area hospitals was compared with data from the Rosen study concerning areas of expressed need for outpatient education programs in United States hospitals. Results of the two studies are compared in Table XXX.

TABLE XXX. EDUCATION PROGRAMS FOR SPECIFIC OUTPATIENT POPULATIONS

| Type of Program | Rank Present Study | Rank Rosen Study |
|---|---|---|
| Diabetes | 1 | 2 |
| Prenatal care | 2 | 3 |
| Heart Attack | 3 | 7 |
| Death and Dying | 4 | * |
| Hypertension | 5 | 5 |

*Not listed in Rosen study.

Most items were similarly ranked in both studies with the exception of Death and Dying which was not listed in the

Rosen study. This discrepancy is probably due to the fact that greater emphasis has been placed on working actively with dying patients and families of dying patients in the six years since the completion of that study.

Data gathered relative to types of audiovisual materials utilized in East Tennessee hospitals for patient education are compared with similar data gathered in the 1975 American Hospital Association study in Table XXXI.

TABLE XXXI. AUDIOVISUAL MATERIALS UTILIZED FOR PATIENT EDUCATION

| Material | East Tennessee Study Rank | AHA Study Rank |
|---|---|---|
| Videotape | 1 | 9 |
| Pictures/charts | 2 | 4 |
| Filmstrips | 3 | 1 |
| Slides | 4 | 7 |
| Audiotapes | 5 | 5 |
| Transparencies | 6 | * |
| Models | 7 | 3 |
| Films | 8 | 2 |

*Not listed in American Hospital Association study.

Videotape is utilized for patient education in East Tennessee hospitals much more frequently than it is utilized in the total population of United States hospitals. Pictures and charts are utilized more frequently in hospitals in East Tennessee than in the hospitals comprising the population for the 1975 American Hospital Association study.

Filmstrips are utilized frequently in both study populations. Slides are utilized more frequently for patient education in the East Tennessee hospitals than in other United States hospitals. It is interesting to note that audiotapes obtained the rank of five in both studies. Transparencies were not utilized for patient education in the hospitals comprising the population for the 1975 American Hospital Association study. Models were utilized by the hospitals in both studies, but they were utilized for patient education less frequently in East Tennessee hospitals than in United States hospitals as a whole. Films were utilized less frequently for patient education in East Tennessee hospitals than in United States hospitals as a whole.

Closed circuit television was utilized for patient education in 14% of the hospitals comprising the study population for the 1975 American Hospital Association study. Although 20% of the East Tennessee hospitals reported owning equipment for closed circuit television, only 15% were actually utilizing the equipment for that purpose.

Six hospitals in the present study reported the existence of a committee to make decisions regarding the development of patient education programs. Data gathered in the present study relative to membership on the committee is compared with data from the 1975 American Hospital Association study in Table XXXII.

TABLE XXXII. MEMBERSHIP ON PATIENT EDUCATION COMMITTEES

| Type of Personnel | East Tennessee Study Rank | AHA Study Rank |
|---|---|---|
| Nurses | 1 | 1 |
| Physicians | 1 | 2 |
| Administrators | 2 | 3 |
| Educators | 2 | 4 |

Nurses were the most frequently cited type of personnel participating in work on the Patient Education Committees in the hospitals comprising the population for the 1975 American Hospital Association study. Physicians and nurses were both frequently cited as participants on this type of committee. It appears that the physicians take a more active role in formulation of policy regarding patient education in East Tennessee hospitals than in other United States hospitals. Administrators and educators were cited as participating on the Patient Education Committee. It is interesting to note that the educators were cited less frequently in the American Hospital Association study than the administrators. In the East Tennessee study these two types of personnel were cited with the same frequency. It is unusual that hospital educators are not frequent participants in this education-related function than nurses, physicians, and administrators.

Data relating to departmental responsibility for coordination of patient education programs are compared in Table XXXIII.

TABLE XXXIII. DEPARTMENTS DESIGNATED TO COORDINATE PATIENT EDUCATION PROGRAMS

| Department | East Tennessee Study Percentage | AHA Study Percentage |
|---|---|---|
| Nursing | 55 | 57 |
| Education | 20 | 24 |
| Administration | 10 | 1 |
| Social Services | 5 | .9 |

The Nursing Department was cited most frequently as having responsibility for coordination of patient education programs in both studies. The Education Department was cited approximately half as frequently in the studies as the Nursing Department. Administration was cited more frequently as having responsibility for coordination of patient education programs in the East Tennessee hospitals than in other United States hospitals. Social Services Department appeared to be cited more frequently in the East Tennessee study than in the American Hospital Association study, but this data may be the result of comparing a small population with a large one.

Data are compared relating to hospital personnel participating in patient teaching in Table XXXIV.

TABLE XXXIV. HOSPITAL PERSONNEL PARTICIPATING IN PATIENT TEACHING

| Type of Personnel | East Tennessee Study Rank | Rosen Study Rank |
|---|---|---|
| Nurse | 1 | 1 |
| Patient Education Coordinator or Health Educator | 2 | 11 |
| Dietician | 3 | 2 |
| Pharmacist | 4 | 8 |

The nurse was the type of personnel participating most frequently in patient teaching for hospitals in both study populations. The dietician and the pharmacist also participated in patient teaching frequently. The role of the Patient Education Coordinator or Health Educator appeared to be more important in East Tennessee hospitals than in the hospitals comprising the population for the Rosen Study. Other types of personnel participating in patient teaching in both study populations were the following: (1) respiratory therapists, (2) physicians, and (3) physical therapists.

According to the 1975 American Hospital Association study 25.9% of the hospitals in the United States have a budget for patient education. It was found that only 20% of the hospitals in East Tennessee have a budget for patient education. Documentation of patient education activities

was accomplished through notation in medical records in both study populations.

## IV. ELEMENTS OF AN IDEAL PATIENT EDUCATION PROGRAM

The search of the literature enabled the investigator to identify major aspects of effective patient education programs. They are the following:

### Levels of Responsibility

The Nursing Department or the Education Department should have administrative responsibility for patient education programs in the hospital, if the institution does not have a Patient Education Department. A multi-disciplinary Patient Education Committee should make policy decisions regarding patient education programs in the hospital. A staff member should be designated to have the major administrative responsibility for the planning, implementation, and evaluation of patient education programs in the hospital. This staff member should have educational preparation in a health-related field as well as educational preparation in the field of education.

### Planning for Patient Education Programs

Patient education programs should be planned to meet the needs of the patients in a specific institution. In

order to determine the nature of these needs, it is important to gather adequate needs analysis data. Data may be gathered through interviewing health professionals and patients, and by examining hospital records regarding types of admissions. Goals and objectives for a patient education program should be based on patient education needs identified through needs analysis.

## Implementation of Patient Education Programs

Staff members should be designated to have responsibility for direct patient teaching. All types of personnel giving direct care could be involved in patient teaching, but specific staff members should be designated to coordinate patient teaching. The staff members responsible for coordination of patient teaching would probably be members of the nursing staff.

## Utilization of Media in Patient Education Programs

The utilization of media in patient education programs has the following advantages:

1. Utilization of media ensures consistency of instruction.

2. Utilization of media results in saving of staff time.

3. Mediated instruction often has a higher interest level than other types of instruction.

4. Utilization of media results in efficient delivery of information to patients.

## Evaluation of Patient Education Programs

Procedures should be established for the evaluation of the effect of a specific patient education program on the individual learner. The evaluation could be in the form of observation of a return demonstration from the patient, or the observation of behavioral changes in the patient.

Formative evaluation of the patient education programs should be based on data gathered from health professionals and patients. It would be best to evaluate the program by testing it on the clinical unit for a period of time. The program could then be revised if necessary for greater effectiveness.

A summative evaluation process should be developed for determining the effectiveness of patient education processes and procedures in the hospital. Data should be gathered through the examination of medical records, interview of patients, interview of health professionals, and observation of patient education processes by the evaluator.

# V. SUMMARY

Questionnaire data collected to fulfill the research objectives for this investigation were presented and analyzed in this chapter. The questionnaire was analyzed by individual research questions. Average rank was computed for the data in which rank order was the means of expressing information. Analysis of data from other portions of the questionnaire was completed through the utilization of frequency and percentage. Elements of an ideal patient education program were constructed from literature findings.

Chapter V summarizes the data, presents findings, draws conclusions, and presents recommendations.

# CHAPTER V

## SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study, the implications of the study, and recommendations for the improvement of patient education programs in East Tennessee hospitals.

## I. SUMMARY

The purpose of this study was to examine the status of patient education programs in East Tennessee hospitals. Substantial data were gathered concerning patient education programs in East Tennessee hospitals. The data were compared with data gathered in earlier similar studies, and guidelines were developed for the improvement of patient education programs in East Tennessee hospitals.

The population for this study consisted of patient educators in twenty East Tennessee hospitals. East Tennessee was defined as the area encompassed by the East Tennessee Development District. The counties in which these hospitals were located were the following: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, and Union.

Data were collected utilizing a six-page questionnaire developed by the investigator for this study. The survey instrument was designed to gather data in the following specific areas:

1. Identification of levels of responsibility for patient education programs in East Tennessee hospitals.

2. Identification of types of patient education programs in East Tennessee hospitals.

3. Identification of planning procedures for patient education programs.

4. Examination of implementation procedures for patient education programs and barriers to the implementation of the programs.

5. Examination of the utilization of media in patient education programs.

6. Examinations of assessment and evaluation procedures for patient education programs.

The data were analyzed utilizing frequencies, percentages, and rank orders. The data were compared to data collected in the 1975 American Hospital Association study, the 1978 American Hospital Association study and the Rosen study of patient education in United States hospitals. In questions three, eleven, and fourteen the respondents were asked to verbalize their perceptions of elements of an ideal patient education program. Comparisons were then made between the

actual programs and the perceptions of the respondents concerning an ideal program.

## II. FINDINGS

### Levels of Responsibility

The respondents were asked to indicate their specific titles in the hospital organization. The four most frequently reported titles were the following: (a) Inservice Education Coordinator, (b) Patient Education Coordinator, (c) Director of Staff Development and Training, and (d) Education Coordinator. Other titles reported by respondents were the following: (a) Staff Development Coordinator, (b) Director of Inservice Education, (c) Director of Social Services, (d) Clinical Specialist, and (e) Child Life Coordinator.

Respondents were asked to report the titles of their supervisors. The title "Director of Nursing" was given in 55% of the cases. Other titles given by the respondents were the following: (a) Director of Inservice Education, (b) Hospital Administrator, (c) Vice President of Patient Care Services, (d) Director of Fiscal Services, (e) Assistant Hospital Administrator, and (f) Director of Staff Development.

Respondents were asked to designate the department in which the respondent was employed. The four most frequently designated departments in order of frequency of response are

the following: (a) Nursing Inservice Education, (b) Education, (c) Nursing Administration, and (d) Administration. Other departments designated were the following: (a) Social Services and (b) Child Life. A total of 57.9% of the respondents were employed in the Nursing Department.

Information was obtained from respondents concerning their educational preparation. The most frequently related type of preparation was "Diploma in Nursing" which accounted for 39% of the responses. Other frequently related types of preparation were the following: (a) M.S. in Nursing, (b) Associate Degree in Nursing, (c) a combination of Diploma in Nursing and B.S. in Education, (d) B.S. in Nursing, (e) a combination of Diploma in Nursing and M.S. in Education, (f) M.S. in Education, and (g) M.S. in Social Work.

Respondents were asked to relate their perceptions of the ideal educational preparation. It was found that a total of 67% of the respondents thought it would be desirable to have some preparation in the field of education, while a total of 61% thought it would be desirable to have some educational preparation in the field of nursing. A combination of degrees in both fields was considered desirable by 55% of the respondents. The most frequently reported types of ideal educational preparation were the following: (a) a combination of a Diploma in Nursing and B.S. in Education, and (b) M.S. in Education. Other types of ideal educational preparation reported in order of

importance were the following: (a) a combination of B.S. in Nursing and B.S. in Education, (b) a combination of B.S. in Nursing and M.S. in Education, (c) a combination of M.S. in Nursing and M.S. in Education, (d) M.S. in Nursing, (e) B.S. in Nursing, (f) B.S. in Education, and (g) B.A. in Psychology.

The actual educational preparation of the respondents was then compared with the ideal educational preparation of the respondents. Most of the respondents thought they should have more educational preparation than they actually had. The response having the greatest frequency for actual educational preparation was "Diploma in Nursing." In comparing the actual educational preparation with ideal educational preparation it was found that not a single respondent indicated that this preparation alone was adequate. Two of the respondents thought a combination of a Diploma in Nursing and an M.S. in Education would be ideal, while one respondent indicated that a combination of a Diploma in Nursing and an M.S. in Education would be ideal. Three of the respondents had an M.S. in Nursing, and two of these respondents thought this was the ideal degree, and one of the respondents thought an M.S. in Education would be ideal. Although two respondents actually had an Associate Degree in Nursing, none of the respondents thought this degree was ideal educational preparation. A total of eleven of the respondents thought some combination of degrees in

nursing and education would be ideal, while only three actually had a combination of degrees in these areas.

Respondents were asked to indicate the percentage of their time that was devoted to patient education activities. Only two of the respondents were full-time patient educators devoting 100% of their time to patient education activities. Eleven of the respondents devoted less than 25% of their time to patient education activities. Five of the respondents devoted 25% of their time to patient education activities, and one respondent devoted 75% of her time to patient education activities.

Six respondents reported the existence of a patient education committee. This committee was responsible for decision-making regarding patient education in the hospitals. Names of the committees in order of importance were the following: (a) Patient Education Committee, (b) Patient Education Communication Committee, (c) Medical Education Committee, and (d) Medical-Nursing Liaison Committee. Types of personnel participating in work on the committee were the following: (a) physicians, (b) nurses, (c) administrators, and (d) educators.

## Types of Patient Education Programs

Respondents were asked to indicate types of inpatient education programs for specific patient populations offered

by area hospitals. The seven most frequently cited inpatient education programs were the following: (a) diabetes, (b) preoperative, (c) diet, (d) heart attack, (e) orientation to hospital, (f) hypertension, and (g) ostomy. The most frequently cited types of education programs for outpatients were the following: (a) diabetes, (b) prenatal, (c) heart attack, (d) death and dying, and (e) hypertension.

Planning Procedures

Respondents were asked to indicate types of hospital personnel having primary responsibility for the planning and coordination of patient education programs. Responses of the subjects in order of frequency were the following: (a) Director of Education, (b) Director of Nursing, and (c) Patient Education Coordinator.

Respondents were then asked to indicate types of professional hospital personnel who would ideally have primary responsibility for the planning and coordination of patient education programs. Responses in order of frequency were: (a) Patient Education Coordinator, (b) Director of Education, and (c) Director of Nursing.

The respondents were asked to relate procedures for obtaining needs assessment data for patient education. The following techniques were utilized to obtain needs assessment data: (a) interview of members of the nursing

staff, (b) interview of members of the medical staff, and (c) examination of medical records to ascertain types of admissions.

Four of the twenty hospitals had a budget specifically for patient education. Items included in the patient education budget were the following: (a) personnel salaries, (b) printed materials, (c) audiovisual materials, and (d) audiovisual equipment. Funds for patient education are often included in budgets for various departments such as in the education department or the nursing department.

## Implementation of Patient Education Programs

Respondents were asked to indicate types of personnel responsible for direct teaching in patient education programs. Their responses in order of frequency were the following: (a) Patient's nurse, (b) Patient Education Coordinator, (c) Dietician, and (d) Pharmacist.

Respondents were then asked to indicate types of professional personnel who would be responsible for direct teaching in an ideal patient education program. Their responses in order of frequency were as follows: (a) Patient's nurse, (b) Patient Education Coordinator, (c) Dietician and (d) Pharmacist. The patient's nurse was responsible for a major portion of the direct patient teaching in actual and ideal patient education programs.

The respondents thought the patient education coordinator would take a more active role in patient teaching in an ideal program than in the actual programs. Four respondents thought physicians should play a more active role in direct patient teaching.

Respondents were asked to indicate methods of instruction utilized for patient education. Methods of instruction utilized by the patient education personnel in the institutions were the following:

1. Verbal information is given to patient.
2. Demonstration.
3. Printed material is given to patients.
4. Audiovisual materials are utilized with verbal information.
5. Audiovisual materials are utilized alone.
6. Audiovisual materials are utilized with printed materials.

Respondents were asked to indicate how patient education activities were documented in their respective institutions. Patient education activities were documented through notations on the patients' charts in 85% of the cases. In one case patient education activities were documented through the utilization of a specific documentation sheet for patient education, and in one case patient education activities were documented through notations on the nursing assessment form.

Respondents were asked to indicate barriers to the implementation of patient education in hospitals. Their responses in order of frequency were the following:

1. Lack of funds for personnel
2. Lack of physician cooperation
3. Lack of funds for materials
4. Lack of work space for personnel
5. Lack of time on the part of nursing staff
6. Lack of planning for the future
7. Lack of patient cooperation
8. Lack of accessibility of equipment for teaching.

Other responses include the following:

1. Nursing staff members do not have teaching expertise.
2. Lack of administrative support and approval.
3. Lack of commitment on the part of nursing administration.

Respondents were asked to indicate specific changes in the hospital environment which would improve patient education programs. These changes included the following:

1. Addition of a patient education specialist to the staff.
2. Allocation of funds for patient education.
3. Evaluation of the results of the teaching-learning experience.
4. Long-range planning.

5. Addition of patient education committee to the hospital committee structure.
6. Administrative support for patient education.
7. Medical staff support for patient education.
8. More spacious physical facilities.

Utilization of Media

Three of the twenty respondents indicated that media specialists were on staff at their respective institutions. Titles given to the media specialists were the following: (a) media technician, (b) inservice education coordinator, and (c) media producer. Departments in which the media specialists were employed included the (a) Hospital Education Department, (b) Education Department and (c) Staff Development Department. Two of the media specialists were full-time employees while the third was a part-time employee working forty hours per month. One of the media specialists did not participate in patient education activities. One media specialist was engaged in patient education activities for 50% of his time and the other was engaged in patient education activities for 25% of his time.

Respondents were asked to indicate types of audiovisual materials owned by the institutions for patient education. The most frequently cited types of materials were the following: (a) pictures/charts, (b) videotape cassettes, (c) slides, (d) models, (e) 16mm films, (f) filmstrips,

(g) audiotapes, (h) transparencies, (i) 8mm films, and (j) reel to reel videotapes.

Respondents were asked to rank audiovisual materials according to frequency of utilization for patient education. The materials in order of frequency of utilization are: (a) videotape cassettes, (b) pictures/charts, (c) filmstrips, (d) slides, (e) audiotapes, (f) models, and (g) 16mm film.

Respondents were asked to indicate types of audiovisual equipment owned by their respective institutions. Equipment listed by the respondents in order of frequency are: (a) audiotape players, (b) videotape cassette players, (c) slide projectors, (d) videotape cassette recorders, (e) transparency makers, (f) filmstrip projectors, (g) 16mm projectors, (h) video camera, (i) 35mm camera, (j) opaque projectors, and (k) overhead projectors.

Respondents were asked to relate whether the audiovisual materials utilized for patient education were commercially produced or internally produced. Four hospitals obtained 100% of the audiovisual materials from commercial sources, and eight hospitals obtained 75% of the materials from commercial sources. Four respondents indicated that 50% of the audiovisual materials utilized in their institutions for patient education was commercially produced, and one respondent indicated that 25% of the materials utilized for patient education were commercially produced.

Six respondents reported that they had access to facilities for television production. Types of facilities utilized by the hospitals for television production were: (a) studio of a local college, (b) studio of a local television station, and (c) studio of a local high school.

Eight hospitals owned closed circuit television systems. Seven of these hospitals owned television receivers and videotape players, and five of these institutions owned modulators for the closed circuit television system, and four of the institutions owned timing devices for the systems.

Assessment and Evaluation Procedures

Respondents were asked to indicate techniques utilized for formative evaluation of patient education programs. These techniques in order of frequency of utilization are the following: (a) physicians assess the program, (b) nurses assess the program, (c) hospital subject specialists assess the program, and (d) the program is tested on the clinical unit. One educator indicated that programs must meet with the approval of the administrative staff before utilization of the program on the clinical unit.

Hospital personnel must have methods of evaluating the effect of the teaching on the patient population. The methods cited most frequently by respondents were the following: (a) interview of patients, (b) patient educator

observes behavioral changes in patient, (c) other health professionals observe behavioral changes in patient, (d) observation of return demonstration by patient, and (e) family of patient observes behavioral changes in the patient.

Methods of data collection for summative evaluation must be developed. Respondents were asked to indicate methods of data collection utilized in area hospitals. These methods were the following: (a) interview selected patients, (b) examination of patient records for evidence of behavioral change, and (c) examination of the inventories administered to patients. Seven respondents indicated that there was no evaluation of the patient education programs in the hospitals in which they were employed.

Respondents were asked to indicate types of personnel or committees responsible for evaluation of patient education programs. The responses in order of frequency were: (1) audit committee, (2) patient education coordinator, (3) quality control committee, (4) patient education committee, (5) medical staff and (6) administrative staff.

Respondents were asked to indicate types of personnel or committees who would be responsible for patient education in an ideal program. Responses in order of frequency were: (1) patient education committee, (2) audit committee, (3) patient education coordinator, and (4) quality control committee.

A comparison was made between types of personnel participating in evaluation of patient education programs in actual and in ideal programs. The patient education committee was viewed as taking a more active role in evaluation of patient education in an ideal program. Audit committee and patient education coordinator were seen as playing approximately the same role in the ideal program as in the actual program.

## III. CONCLUSIONS

Analysis of the data enabled the investigator to draw the following conclusions:

1. Patient education is a part of the patient care process in East Tennessee hospitals.

2. Hospitals in East Tennessee have initiated and implemented the same types of patient education programs as other United States hospitals.

3. The Nursing Department is primarily responsible for planning, implementation, and evaluation of patient education programs in East Tennessee hospitals.

4. Few hospital disciplines are represented on the patient education committee.

5. Personnel responsible for the development of patient education programs are usually nurses who have little preparation in the field of education.

6. Few East Tennessee hospitals have staff members whose sole function is to develop patient education programs.

7. Few East Tennessee hospitals had separate budgets for patient education.

8. There is little evidence of the utilization of needs analysis data in program planning.

9. Unstructured verbal instruction is the most frequently utilized teaching method in East Tennessee hospitals.

10. Although audiovisual materials are often utilized for portions of patient education programs, there are few hospitals who have staff members whose function is to produce these programs.

11. Nurses have the responsibility for most of the direct patient teaching in the hospitals.

12. There is no serious attempt to assess the learning needs and characteristics of the patients.

13. There is little evidence of formative evaluation of patient education programs.

14. There is no organized summative evaluation process for patient education programs in East Tennessee hospitals.

## IV. RECOMMENDATIONS

Administrative commitment to patient education is basic to the development of patient education programs in hospitals.

Other recommendations for the development of more effective patient education programs in East Tennessee hospitals are the following:

1. Needs analysis should be part of the development of an effective patient education program. Sources of needs analysis data include the following: (a) medical records, (b) patients, (c) nurses, (d) physicians, and (e) hospital subject specialists.

a. Examination of medical records could produce data with regard to types of admissions.

b. Interview of patients could produce data regarding the nature and presentation of the content.

c. Interview of physicians and nurses could produce information which would be helpful in defining content areas.

d. Interview of subject specialists such as pharmacists and dieticians could be helpful in defining content areas.

2. A department must be designated to have responsibility for the development of patient education programs. The designated department may be the Education Department, Nursing Department, or the Patient Education Department. Advantages of placing the patient education function in the Education Department are the following:

a. Education Department staff members have skills for developing education programs.

b. Education Department staff members have time for planning.

Advantages to placing the patient education function in the Nursing Department are the following:

a. The Nursing Department is basically responsible for patient care in the hospital and patient education is part of that care.

b. The Nursing Department can gain the support of the clinical units more readily than other departments.

3. It is best if the hospital can have a staff member whose sole function is to develop patient education programs. This staff member should have education preparation in a health-related field as well as preparation in the field of education.

4. Patient Education Committees should be multi-disciplinary in nature. Staff members such as dieticians, pharmacists, and physical therapists should be considered for committee membership. A hospital staff member without educational preparation in a health-related field would be a valuable person to help plan patient education programs from the patient viewpoint.

5. A separate budget should be established for patient education.

6. There must be a definite plan of instruction in patient teaching. Unstructured instruction of the patient

does not accomplish the goals and objectives of the patient education program.

7. Methods of instruction should vary according to learning characteristics of the patient, the nature of the content, and the resources available in the institution. Group instruction can be more effective than individual instruction for the following reasons:

a. Patients are able to interact and discuss areas of interest to all of them.

b. Group teaching results in significant saving of staff time.

8. Although the patient's nurse may perform most of the direct patient teaching, subject specialists such as dieticians, pharmacists, physical therapists, and respiratory therapists should be a part of the instructional team. The patient's nurse could coordinate patient teaching efforts.

9. It would be best if the individual hospitals could employ media specialists to supervise production of audio-visual materials for patient education. Since this is not always possible, a media specialist could be shared by several hospitals.

10. The learning needs and characteristics of the patient should be assessed prior to the educational experience.

11. A process should be established for formative evaluation of patient education programs. The programs may be assessed by health professionals as part of the evaluation process, but special effort must be made to determine whether the programs can be effectively utilized for the benefit of patients. In order to make this determination, the program should be tested on the clinical unit and revised if necessary.

12. A process should be developed for determining whether the patient education program is meeting the needs of the patients. Data gathered for summative evaluation will provide information concerning the worth of the patient education program as a whole.

## V. IMPLICATIONS FOR FURTHER STUDY

The following are recommendations for further study:

1. A study should be undertaken in order to determine actual implementation procedures for patient education programs in East Tennessee hospitals. This could be accomplished through interview of health professionals and patients and observation of patient education activities. The result would be a case study which would yield more comprehensive data regarding patient education in East Tennessee hospitals.

2. A replication of the present research utilizing the survey instruments developed by this investigator should be undertaken to study the status of patient education in Middle and West Tennessee hospitals.

3. Research should be undertaken regarding the effectiveness of various types of methods and materials utilized for patient education.

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# APPENDIX

# APPENDIX

## EAST TENNESSEE PATIENT EDUCATION SURVEY

Directions: Unless otherwise specified, please respond to the questions by indicating the alternative which is most descriptive of your patient education program. When the accurate alternative is not listed, mark the item "Other" and then specify the accurate response. For the purpose of this survey, patient education program is defined as educational activities based on an instructional plan which includes specified educational objectives and methods of teaching for the patient and/or the patient's family.

JOB TITLE _____

JOB TITLE OF YOUR IMMEDIATE SUPERVISOR _____

1. In what department are you employed?

_____ Education

Nursing
_____ Administration
_____ Inservice

_____ Social Service

_____ Public Relations

_____ Administration

_____ Other-Please specify

_____

2. What is your educational preparation? (Check all applicable)

_____ Associate degree in nursing
_____ Diploma in nursing
_____ B.S. in nursing
_____ B.S. in education
_____ M.S. in nursing
_____ M.S. in education
_____ M. Public Health
_____ Other (Please specify)

_____

3. In your opinion, what would be the ideal education preparation for a person in your position? (Check all applicable)

_____ Associate degree in nursing
_____ Diploma in nursing
_____ B.S. in nursing
_____ B.S. in education
_____ M.S. in nursing
_____ M.S. in education
_____ M. Public Health
_____ Other (Please specify)

_____

4. (a) Is there any employee in your institution assigned to direct patient education activities for 100% of his/her time at the hospital? _____ Yes _____ No
   (b) If yes, how many employees? _____

5. Approximately how much of your time is spent on patient education activities?

_____ 100%
_____ 75%
_____ 50%
_____ 25%
_____ less than 25%

6. (a) Is there a definite budget for patient education? _____ Yes _____ No
   (b) If yes, what items are included in the patient education budget?

_____ Personnel salaries
_____ Printed materials
_____ Audiovisual materials
_____ Audiovisual equipment
_____ Other (Please specify)

_____

7. How do you obtain information regarding the types of patient education programs which should be offered? Check all applicable responses, then rank the five most frequently used information sources. Number 1 will be the most frequently used information source.

_____ Obtain information from Medical Records concerning types of admissions.
_____ Interview physicians concerning needs for patient education programs.
_____ Interview nurses concerning needs for patient education programs.
_____ Interview patients concerning needs for patient education programs.
_____ Other (Please specify) _____

8. (a) Does your hospital have a committee which coordinates the planning of patient education programs? _____ Yes _____ No

(b) If yes, what is the specific name of the committee?

_____

(c) If yes, please indicate which of the following have membership on the committee. Please indicate as many as applicable.

_____ Physician
_____ RN
_____ Administrator
_____ Educator
_____ Patient representative
_____ Other (Please specify)

_____

_____

9. See next page

10 How does a patient education program gain final approval in your hospital? (Check all applicable)
_____ Hospital personnel (dieticians, pharmacists, etc.) assess program
_____ Nurses assess program
_____ Physicians assess program
_____ Outside experts/consultant assess program. (Please specify type of expert/consultant) _____
_____ Test program on one unit for several weeks
_____ Other (Please specify) _____

11 In your hospital, who directs the planning and coordination of patient education activities? (Please indicate only one response)

_____ Director of education
_____ Director of nursing
_____ Director of patient education/Patient education coordinator
_____ Other (Please specify) _____

12. In an **ideal** patient education program, who would direct the planning and coordination of patient education activities? (Please indicate only one response)

_____ Director of education
_____ Director of nursing
_____ Director of patient education/Patient education coordinator
_____ Other (Please specify) _____

13 In your hospital who does the actual patient teaching? Check all applicable responses, then rank your responses. Number 1 would be the professional who does the most patient teaching.

_____ Dietician
_____ Pharmacist
_____ Patient's nurse
_____ Patient education coordinator
_____ Other (Please specify) _____

9. Please indicate the patient education programs that your hospital conducts for specific patient populations. (Please check as many as applicable.)

| | IN OPERATION | IN PLANNING STAGES | INPATIENT | OUTPATIENT |
|---|---|---|---|---|
| Alcohol and drug dependency | | | | |
| Arthritis | | | | |
| Cancer | | | | |
| Ostomy | | | | |
| Mastectomy | | | | |
| Other cancers | | | | |
| | | | | |
| Death and Dying | | | | |
| Dental | | | | |
| Diagnostic tests | | | | |
| Diabetes | | | | |
| | | | | |
| Exercise | | | | |
| Family Planning | | | | |
| Gastrointestinal | | | | |
| Genitourinary | | | | |
| | | | | |
| Glandular | | | | |
| Heart and Circulatory | | | | |
| Pacemaker | | | | |
| Stroke | | | | |
| Hypertension | | | | |
| Heart Attack | | | | |
| Congestive Heart Failure | | | | |
| Open heart surgery | | | | |
| | | | | |
| Kidney | | | | |
| Diet | | | | |
| Orientation to hospital (patient) | | | | |
| Orthopedic | | | | |
| | | | | |
| Prenatal | | | | |
| Preoperative | | | | |
| Respiratory | | | | |
| Smoking | | | | |
| | | | | |
| Visual or hearing | | | | |
| Other (Please specify) | | | | |
| _____ | | | | |
| _____ | | | | |

14. In an ideal program, who would do the actual patient teaching? Check all applicable responses, then rank your responses. Number 1 would be the professional who does the most patient teaching.

_____ Dietician
_____ Patient's nurse
_____ Patient education coordinator
_____ Pharmacist
_____ Other (Please specify) _____

15. How do you keep records of the fact that the patient has participated in patient education activities? (Check all applicable)

_____ Notation on patient's chart
_____ Notation on Kardex
_____ Other (Please specify) _____

16. How do you know whether the patient has acquired the needed information? (Check all applicable)

_____ Interview the patient to test understanding
_____ Administer a written quiz/inventory to the patient
_____ You observe behavioral changes in the patient
_____ Other health professionals observe behavioral changes in patient

_____ Other (Please specify)

_____

17. How do you know that the patient education programs in your hospital are effectively meeting patient needs? (Check all applicable)

_____ No evaluation process
_____ Interview selected patients
_____ Examine results of quiz/inventory given to patients and compile statistics
_____ Examine patient records for notations concerning behavioral changes and compile statistics.
_____ Other (Please specify) _____

_____

18. Do you have a hospital media specialist? _____ Yes _____ No
(a) If yes, what is his/her job title?

_____

(b) In what department is she/he employed?

_____

(c) Is the media specialist a full-time employee? _____ Yes _____ No
If no, please specify number of working hours per week for media specialist _____

(d) Approximately what percentage of his/her time is spent on patient education activities?

_____ 100%
_____ 75%
_____ 50%
_____ 25%
_____ less than 25%

19. What teaching methods do you use for patient education? Please check all applicable responses, then rank the five most frequently used methods. Number 1 would be the method most frequently used.

_____ Demonstration of skill or techniques
_____ Printed materials are given to patient
_____ Verbal information is given to patient
_____ Audiovisual materials are utilized with verbal instruction
_____ Audiovisual materials are utilized with printed materials
_____ Audiovisual aids are utilized alone.
_____ Other (Please specify) _____

20. What kind of audiovisual materials do you own for patient education? (Check all applicable)

_____ 16 mm film
_____ videotape cassettes
_____ slides (2 x 2)
_____ filmstrips
_____ videotape (reel to reel)
_____ 8 mm film
_____ transparencies
_____ pictures/charts
_____ models
_____ audiotapes

21. What audiovisual materials do you use for patient education? Check all applicable responses, then rank the five most frequently used types of materials. Number 1 would be the material most frequently used.

_____ 16 mm film
_____ videotape cassettes
_____ slides (2 x 2)
_____ filmstrips
_____ videotape (reel to reel)
_____ 8 mm film
_____ transparencies
_____ pictures/charts
_____ models
_____ audiotapes

22. What audiovisual equipment do you own which could be used for patient education activities? (Check all applicable)

_____ 16 mm camera
_____ videotape cassette recorder
_____ videotape cassette player
_____ slide projector for 2 x 2 slides (include Kodak carousel)
_____ filmstrip projector
_____ reel to reel videotape recorder/player
_____ videotape camera
_____ 8 mm camera (motion picture camera)
_____ 35 mm camera (for slides and prints)
_____ transparency maker
_____ slide duplicator
_____ opaque projector
_____ audiotape player _____ reel to reel _____ cassette
_____ Other (please specify)

_____

23. Approximately what percentage of your audiovisual materials are commercially produced?

_____ 100%
_____ 75%
_____ 50%
_____ 25%
_____ less than 25%

24. Approximately what percentage of your audiovisual materials are produced by your institution?

_____ 100%
_____ 75%
_____ 50%
_____ 25%
_____ less than 25%

25. What kind of studio facilities are available to you for television production?

_____ No studio facilities are available to us
_____ Use our own television studio
_____ Utilize the studio of our local college/university
_____ Utilize the studio of our local television station
_____ Utilize the studio of an advertising agency

26. (a) Do you have a closed circuit television system?
_____ Yes _____ No

(b) If yes, what kind of equipment do you own for the closed circuit television distribution system in your hospital?

_____ videotape players
_____ switcher
_____ modulator
_____ programmer
_____ television receivers
_____ other (please specify) _____

27. From what location do you obtain audiovisual equipment for patient education in your hospital?

_____ From an AV department/area
_____ From the Inservice education department
_____ From the library
_____ Other (Please specify) _____

28. From what location do you obtain audiovisual materials (film, filmstrips, etc.) for patient education in your hospital?

_____ From an AV department/area
_____ From the Inservice education department
_____ From the library
_____ Other (Please specify) _____

29. Which of these factors are the greatest barriers to the development and implementation of patient education programs in your hospital? Check all applicable responses, then rank the five greatest barriers. Number 1 would be the greatest barrier to the development and implementation of the patient education program.

_____ lack of planning for the future
_____ lack of physician cooperation
_____ lack of patient cooperation
_____ lack of time on the part of the nursing staff
_____ lack of funds to purchase needed materials
_____ lack of funds for needed personnel
_____ lack of needed work space for personnel
_____ lack of accessibility of equipment and materials.
_____ Other (Please specify) _____

_____

30. Who does overall evaluation of patient education activities in your hospital? (Please indicate only one response.)

_____ Audit Committee
_____ Patient Education Committee
_____ Patient Education Coordinator
_____ Quality Control Committee
_____ Other (Please specify) _____

_____

31. In an ideal patient education program, who would do overall evaluation of patient education activities? (Please indicate only one response.)

_____ Audit Committee
_____ Patient Education Committee
_____ Patient Education Coordinator
_____ Quality Control Committee
_____ Other (Please specify) _____

_____

32. What specific changes would you make in your patient education program to insure a more nearly ideal program?

_____

_____

_____

# VITA

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