A DESCRIPTIVE STUDY OF STROKE PATIENTS DISCHARGED FROM STILLWATER MEDICAL CENTER TO REHABILITATION FACILITIES IN OKLAHOMA

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appropriate that I dedicate this document, a tangible result of the experiences in this new life, to the memory of my grandmother May C. Sinclair.

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CHAPTER I

INTRODUCTION

The concept of rehabilitation medicine with physically disabled individuals began during World War II. Howard Rusk, presently the director of the New York University School of Medicine's Institute of Rehabilitation medicine was a pioneer in the field (Hoffman, 1981). Rehabilitation, according to Rusk, provided a program to, ". . . meet the total needs for the disabled person" (Hoffman, 1981, p. 1503).

Rusk began to advocate the need for rehabilitation during World War II. As an Army physician, Rusk was placed in charge of a large Army hospital near St. Louis. After examining hospitalized patients, he discharged 90 percent of them. The patients were medically stable, but could not return to their former demands of long hikes carrying heavy backpacks. Many of the patients were quickly readmitted to the hospital with exhaustion. Rusk soon realized the need for a reconditioning program to gradually return them to their duties (Hoffman, 1981).

After the war, Rusk created the Rehabilitation Medicine Service at Bellvue Hospital in New York City. This was the first rehabilitation facility open to the civilian population. The goals, however, remained the same as in the Army hospital.

A cerebrovascular accident or stroke occurs in about two and one half million people in the United States with approximately half a

million new strokes annually. "Among whites the incidence of strokes is 2 to 1 of men to women, and among blacks it is 3 to 2" (Broida, 1979, p. 5). The stroke often left patients with paralysis of the extremities, communication problems and dependence in the areas of self care and mobility (Hopkins, 1978 and Rusk, 1971).

After stabilizing medically, a patient would be discharged from the acute general hospital. The discharge settings include the patient's home, a nursing home or rehabilitation facility (Hirschberg, 1976).

The patient, after returning home, would benefit psychologically from the familiar setting and privacy. There were several reasons that returning home would not be feasible for all patients (Hirschberg, 1976):

1. It is less and less common to find family members who have the time and desire to take care of the patient.

2. Health insurance will pay for the care in the hospital, but not for rehabilitation at home.

3. In the time it takes the physician to make a home visit to see one hemiplegic patient, for instance, he or she can easily see ten or 15 hemiplegic patients in the hospital. Other health team members are also more efficient in an institutional setting (pp. 147-148).

The nursing home provided long term custodial care. Two types of patients were referred to this setting, patients who have received maximum benefit from therapy, but are too dependent in activities of daily living to return home or patients who are too severely affected by a stroke to benefit from therapy (Hirschberg, 1979).

A rehabilitation facility,

> . . . offers a variety of services in the medical, psychological, social and vocational areas, in an integrated manner for the primary purpose of advancing the rehabilitation of disabled individuals (U.S. Department of Health, Education and Welfare, 1977, p. 439).

It provided care for stroke patients who required several weeks to several months of therapy before returning home. The main disadvantage was the psychological trauma of being away from home, family and friends and adjusting to a new setting. Another problem was that some insurance companies, ". . . questioned the worth of the end product. . ." (Mittelmann, 1980, p. 488), and would make inadequate reimbursement for services received.

Outpatient rehabilitation services may have been provided by the rehabilitation facility or local hospital with occupational, physical and speech therapists available. This allowed the patient to receive therapy after discharge from a rehabilitation facility or after he/she was no longer confined to home.

A search of the medical files of Stillwater Medical Center revealed that from January 1980 to January 1983 there were 171 stroke patients admitted to the hospital. There were 149 patients discharged from the hospital to one of the above settings and 22 patients expired.

Discharge planning involved the physician, nurses, therapists, social worker, family and patient working together as a team. However, until the time of this study there was no standard method for patients to communicate with Stillwater Medical Center concerning their subjective assessment of their progress of opinions concerning referral to a specific rehabilitation facility.

Statement of the Problem

The purpose of this study was to describe the subjective assessment of the rehabilitative progress of stroke patients and to gather opinions from stroke patients who were discharged from Stillwater Medical Center to rehabilitation facilities in Oklahoma. The study specifically addressed the following elements of the subjective assessment:

1. Part one of the questionnaire sought to gather the patient's subjective assessment of his/her functional abilities before rehabilitation.
2. The second part of the questionnaire sought to gather the patient's subjective assessment of his/her functional abilities after rehabilitation.
3. The third part of the questionnaire sought the name of the rehabilitation facility to which the patient was transferred and the patient's subjective ratings of the nursing care, therapy received and formation of programs to meet individual needs.
4. The fourth part of the questionnaire sought further clarifications of any answers by the respondents or to write any other comments about the rehabilitation facility.

Hypothesis

H_o - No difference existed between pre-rehabilitation functional ability and post-rehabilitation functional ability among patients

discharged from Stillwater Medical Center to rehabilitation facilities in Oklahoma.

H_1 - Differences existed between pre-rehabilitation functional ability and post-rehabilitation functional ability among patients discharged from Stillwater Medical Center to rehabilitation facilities in Oklahoma.

No other statistical hypotheses were appropriate for this study. However, the data in the final two sections of the questionnaire were tabulated and reported in the results (Chapter IV).

Basic Assumptions

For the purpose of the study of subjective assessments of attitudes of this group of stroke patients, the following basic assumptions were made:

1. There was a need for some stroke patients to receive rehabilitation.
2. A valid self assessment tool could be constructed to evaluate a patient's functional level in activities of daily living.
3. Each respondent to the questionnaire was able to comprehend written English and follow simple written instructions.
4. It was assumed that the patient was able to accurately recall the information sought on the questionnaire (Bradburn, 1979).

Delimitations

The study of the subjective assessments of attitudes of this group of stroke patients was delimited to patients from Stillwater Medical Center to rehabilitation facilities in Oklahoma during the time period of January 1980 to January 1983.

Limitations

The limitations of the study included instrument design, administration of the instrument, errors in response and personal biases, and by the limitations placed on the investigator of funding, time and manpower.

The study was further limited by the extend to which the instrument constructed was both reliable and valid. Further limitations of the instrument included the extent to which the directions were clear and the instrumental terminology was understandable to the respondents. Finally, the problem of accurate recollection of information requested on the survey limited the validity of the results.

Definitions

Cerebral vascular accident - "The cells of the brain have an insatisable need for oxygen. The nourishment is supplied in large quantities by an abundant network of blood vessels that make up the brains vascular system. Conditions involving reduced blood supply to the brain are designated as cerebrovascular accident (CVA). Commonly, the patient is then said to have had a stroke. The nature of the stroke

and the course it follows are largely dependent on the location and extent of brain injury incurred" (Hirschberg, 1976, p. 123).

Hemiplegia - ". . . paralysis of one half of the body. If no voluntary motion is possible on the hemiplegic side, the hemiplegia is complete, if some voluntary motion is present, the hemiplegia is partial hemiparesis" (Hirschberg, 1976), p. 219-220).

Aphasia - "Partial or total loss of ability to communicate with others through the use of language. Aphasic impairment includes expression by means of speech, writing, and gestures, or reception of the thoughts of others through their spoken, written, or gestural language" (Broida, 1979, p. 145).

Occupational therapy - Therapy that uses selected tasks such as feeding, bathing and dressing to enhance a stroke patient's independence in basic activities of daily living and therefore promoting physical and mental health.

Physical therapy - Therapy that uses physical exercise and activities to improve a stroke patient's gross coordination and mobility.

Speech therapy - Therapy that uses specific tasks to improve a stroke patient's ability to communicate with others.

Activities of daily living - ". . . encompassed feeling, dressing, and personal hygiene activities which are basic to an individual's independence. ADL in its broadest sense encompasses independence in the home, at work, and in the community" (Hopkins, 1976, p. 184).

Functional level - Refers to level of independence where patient requires minimal to no assistance to complete activities of daily living.

Rehabilitation facility - A facility that services, ". . . patients who are so severely disabled that it may take several weeks or months of intensive rehabilitation to enable them to become independent or to be prepared for attendant care outside the hospital" (Hirschberg, 1976, p. 145).

Threatening question - ". . . questions to which the respondents might respond untruthfully" (Bradburn, 1979, p. 2).

Memory - ". . . a general term for a mental process that allows the individual to store experiences and perceptions for recall at a later time" (Strub, 1977, p. 64).

Recent memory - ". . . the ability to learn new material and to retrieve that material after an interval of minutes, hours or days" (Strub, 1977, p. 64).

Remote memory - ". . . traditionally used to refer to very early recollections such as the names of teachers and old school friends, birth dates, and historical facts from the patients earlier years" (Strub, 1977, p. 65).

CHAPTER II

REVIEW OF LITERATURE

Introduction

Literature pertaining to subjective assessment of stroke patient's rehabilitative progress and opinions about rehabilitation facilities was limited in availability. The author obtained most material from medical libraries, however, each source only supplied a small piece of information. A Medline search and Index Medicus provided general guidance for the study. There was a search of material covering the past five years. Prior to that time there was very little material available and the writer wanted information as current as possible. The review of literature concentrated on formulation of the problem and the assessment tool.

Literature on Formulation of Problem

The problems noted in this study were formulated mainly as a result of clinical experience with rehabilitation patients. There were times the author wanted to clarify that the problems did exist and so a literature search was done.

Information concerning incidence of strokes was found in several sources. Feibel and Springer (1982, p. 276) report that stroke, "is a major cause of morbidity and loss of productivity in this country."

Broida (1979) expanded on this stating that stroke is the third largest cause of death accounting for 200,000 deaths annually in the United States. She continued:

> Only about 10 percent of people who survive strokes can return to their accustomed life styles with virtually no residual impairment. However, 40 percent suffer only mild disability with little interference in their way of life unless they choose to let it interefere. Another 40 percent are disabled enough to require special services such as physical therapy, occupational therapy, speech and language therapy, vocational rehabilitation, etc. The remaining 10 percent will be so severely disabled as to require permanent institutional care (p. 6).

Other authors documented the impairments that may result from a stroke. Hirschberg (1976, p. 6) stated that the "sudden cessation of blood flow may result in immediate collapse, unconsciousness, hemiplegia and aphasia." Spencer (1976) expanded, explaining:

> Depending upon which side of the brain is involved, there can be, in addition to motor and sensory deficits, impairment of perceptual and cognitive functions, of premorbid personality, of motor planning and problem solving abilities, and of judgment. Urinary incontinence, motivation, and a sense of social awareness and responsibility may be lost (p. 357).

Literature also supported the fact that rehabilitation was a cost containment device. Newman (1979) discussed the alternatives for post discharge placement of stroke patients:

> Although a small percentage of these patients are either too severely affected to respond to rehabilitation or so mildly affected that they require no treatment beyond a few days in the hospital, the great majority require rehabilitation services, most are medically stable and can be transferred to rehabilitation care within 10 to 14 days. One study, which evaluated the results of severely involved patients treated in rehabilitation centers, revealed that 75 percent went home in one month. One year later, 80 percent were still at home and 90 percent were improved or no worse. Among another group of patients, who had acute care only, 80 percent went

> to skilled nursing facilities and one year later were still there. It was much less expensive to live at home after receiving rehabilitation than to receive custodial care in long term custodial care facilities (p. 45).

Cooper (1980) reinforces the concept of cost effectiveness of rehabilitation:

> Rehabilitation services for other patients normally considered high-cost patients can be extremely effective in containing costs when compared to the alternative of providing only acute care service. A comprehensive and intensive program of rehabilitation services, which is organized, planned and tailored to the individual patient in the catastrophic or severely disabled group, can substantially reduce lifetime health care costs (p. 45).

Rehabilitation, whether in an acute medical or specialized rehabilitation setting, had become a service that was a necessary part of medical care. According to Cooper (1980):

> Rehabilitation services are becoming more essential as medical advances prolong lives. The percentage of the population with impairments due to illness, injury, disease and age is increasing as a result of improved emergency care and the greater availability of life-saving medical technology and pharmaceuticals. . . Although rehabilitation services aren't classified as capable of curing a particular injury, illness or disease, they can enable handicapped people to cope with their conditions at the maximum level possible (p. 68).

A study conducted by Smith and Smith (1982) compared stroke patients treated in regular medical units and those treated in rehabilitation units.

> In a randomized controlled trial of management of acute stroke in the elderly, a higher proportion of patients were assessed as independent in self-care in a stroke unit compared with patients with similar levels of neurologic impairment treated in medical units. The use of physical therapy and occupational therapy in the stroke unit and medical units was compared. Patients in the stroke unit received less therapy over a shorter period of time; however, a higher proportion had occupational therapy beginning at a much shorter interval after admission. Early introduction of rehabilitation by therapists may be more important than the amount or duration of treatment (p. 21).

Therefore, regardless of the location, many patients require rehabilitation and to receive maximum benefit from therapy should be referred for services as quickly as possible.

Literature on Methodology of Assessment Tool

Basic research texts were used to determine that the descriptive survey method was appropriate for this study. The purpose of the study was to look at the stroke patients discharged from the medical center and to describe their reactions to the specific event, receiving therapy at a rehabilitation facility. According to Leedy (1980, p. 97), the descriptive survey method, "looks with intense accuracy at the phenomena of the moment and then describes precisely what the researcher sees." Pelegrino (1979, p. 53) states it, "is very often the only means in which opinions, attitudes and other such data can be obtained."

The questionnaire was the tool chosen to gather the data. As Good (1954, p. 606) explained, "The questionnaire is particularly useful when one cannot readily see personally all of the people from whom he desires responses." Jantzen (1981) discussed other advantages of the questionnaire.

> They are less expensive than an interview, take less skill to administer, and can be administered to a large number of people at the same time. Since questionnaires can be sent through the mail, they can cover a wider geographical area generally, and, thus, permit you with your limited funds to obtain more information from more subjects. Questionnaires also seem to be more impersonal to the respondents who may have more confidence in responding knowing they may remain anonymous (p. 35).

Leedy (1980) specified certain guidelines for construction of the questionnaire. These include being courteous when asking the subject

to respond to the questionnaire, making it simple to understand and making it brief. As he explained:

> The questionnaire should be as brief as possible and should solicit only those data essential to the research project. This need not curtail the adequacy of the instrument, but the researcher should test every item by the following two criteria: (a) what do I intend to do with the information I am soliciting and (b) is it absolutely essential to have this information to solve any part of the research endeavor?" (p. 100-101)

He also suggested that the investigator carefully word the cover letter and enclose a self-addressed stamped envelope with the questionnaire.

Bradburn (1976, p. 2) performed a study on threatening questions in a survey, "that is, questions to which respondents might respond untruthfully." The untruthful responses included overrating socially desirable behaviors and underrating socially undesirable ones. The possibility of progress in rehabilitation being considered as the socially desirable behavior as opposed to the lack of progress being socially undesirable behavior influenced the formation of the questionnaire. Although the same items remained on the questionnaire, the patients were assured that their answers would remain confidential. As Bradburn (1976, p. 170) stated, "Assuring respondents of absolute confidentiality has a small but consistent effect on the willingness of respondents to answer individual threatening questions."

Problems with memory influenced the time span that could be covered by the questionnaire. Johnson (1976, p. 451) reported that as one ages, "the cerebral integration mechanisms are reduced, which affect the speed of learning (and) the ability to store information." Russell (1977) also discussed memory and aging:

> As age advances all new experiences become more complex from the remembering point of view, since every experience has to be correlated and fitted into existing memories. As these existing memories become more numerous, the process of remembering becomes even more complex (p. 104).

According to Holvey (1972), the most common type of cerebrovascular accident occurs most often in those over 60. Since strokes primarily involved the elderly, the problem of impaired memory due to the aging process or due to the stroke precipitated the limitation of the study to patients who were seen at Stillwater Medical Center within the past three years.

There were several pre-existing tools to evaluate activities of daily living skills examined by the investigator. Donaldson (1973, p. 175) discusses the "unified ADL evaluation form." He explained several purposes of a good ADL scale were to:

> Describe a patient's funcational status at a given point in time. . ., performing sequential re-evaluations, . . . to detect improvement or deterioration in functional status, . . .(+0) enhance communication of patient information between health care facilities and personnel. . .and as an aid to discharge planning (p. 175).

Granger (1979) reviewed the areas covered by the Barthel Index and the Pulses Profile. These areas included physical condition, self-care independence, mobility, communications, excretory functions and support factors. These encompassed many areas of life functioning, but were objectively assessed by therapists working with the patients in rehabilitation settings. The same was true of the assessment constructed by Malick (1980). It provided assessment of self care, mobility and homemaking, but did not rely on any self reporting from patients.

One article was found that addressed the problem of non-response bias with questionnaires. The suggestions to alleviate the problem

included, "A cover letter emphasizing the usefulness of the study, letterhead stationery; stamped and return addressed envelopes, first class mailings and. . . follow ups" (Wendling, 1980, p. 53).

Wendling planned a study of managers in a specific field and performed the following action:

> To provide clear, concise, and unambiguous questions and to prevent sampling bias, the survey instrument was evaluated by managers outside the study area. They were explicitly directed to elaborate on any question that caused confusion and on the arrangement of questions (1980, p. 53).

Conclusion

After the review of literature, it was clear that a study of this type had never been conducted. Since the incidence of stroke was so high, the importance of discharge planning for the physical and emotional well being of the patient could not be overstressed. The planned study would improve the discharge planning process and add to the body of knowledge available to other health professionals dealing with similar problem.

CHAPTER III

PROCEDURES

The purpose of this study was to describe the subjective assessment of rehabilitative progress and to gather opinions from stroke patients discharged from Stillwater Medical Center to rehabilitation facilities in Oklahoma. The process for the study was as follows: (a) the survey instrument was conceptualized and designed; (b) the sample population was determined and identified; (c) the questionnaire was administered; (d) the data were tabulated and analyzed by hand; and (e) conclusions concerning the problem were drawn based on the results of the data analysis.

The discussion in this chapter addresses the specific procedures by which the questionnaire was designed, constructed, revised and administered. The discussion further details the identification of the patient sample and a description of the data analysis is then presented.

Development of the Questionnaire

The instrument used for data collection was the questionnaire. The literature failed to produce any prior studies utilizing a self assessment instrument to determine levels of independence in activities of daily living. Thus, it was necessary to develop a questionnaire

to be used for the study. The investigator used several periodical articles during the questionnaire design process including Donaldson (1973) and Granger (1979).

The investigator divided the questionnaire into three parts including: (a) pre-rehabilitation functional status; (b) post-rehabilitation functional status, and (c) opinions about the rehabilitation facility and services received.

The questionnaire was initially assembled by the investigator utilizing broad categories from other activities of daily living indexes. The areas of opinions about the rehabilitation facilities were based on the categories patients demonstrated the most concern about prior to transfer to the facilities.

The questionnaire was reviewed by the investigator and her advisor. The review examined the clarify of the questions and answers, the appropriateness of the questions, the relationship of questions to the problem and the layout of the questionnaire itself. This resulted in a rearrangement of the items, but no other alterations were required.

Following that process, the rough draft questionnaire was reviewed with four registered physical therapists, one registered nurse and a former stroke patient. They examined the completeness of the questionnaire, the clarify of the questions and the ease of understanding the items. The suggested revisions were made and the questionnaire was presented in its final form for review with the investigator's advisor.

The author used a panel of experts to determine the content validity of the instrument. The review panel was comprised of a registered nurse who has worked with stroke patients for 25 years, four

physical therapists who have a total of 24 years of experience working with stroke patients, one stroke patient who did not go to a rehabilitation facility and one who was discharged to a rehabilitation facility from another facility.

Identification of the Patient Population and Selection of the Subjects

The patient population for this study was stroke patients who were discharged from Stillwater Medical Center to rehabilitation facilities in Oklahoma from January 1980 through January 1983. The population was identified after a search of a card file with primary and secondary diagnoses of every patient admitted to Stillwater Medical Center. The patients listed as having a cerebrovascular accident were recorded and a hand search of their medical records was done. The patients discharge to rehabilitation facilities were separately listed on numbered index cards. Since there were only 14 patients discharged to rehabilitation facilities during the specified time period, all were included in the study.

Administration of the Questionnaire

Initially there were ten patients in this study. Each was sent an envelope containing a cover letter explaining the purpose of the study and assurance of confidentiality of answers, the questionnaire and a self-addressed stamped return envelope. Two weeks after the initial mailing of the instrument a postcard follow-up was sent. A final postcard follow-up was sent two weeks later.

Two weeks after the initial mailing it was discovered that patients with a secondary diagnosis of stroke were not included in the hand search of the charts. Another search revealed four additional stroke patients had been sent to rehabilitation centers. The questionnaires were then sent to those patients and the same follow-up procedure was completed.

Analysis of the Data

After the data were received from the respondents, usable questionnaires were separated from the unusable ones. There were nine completed questionnaires returned, three who did not wish to participate due to the patient's death and one where the patient no longer lived at the address listed in the medical chart and left no forwarding address.

Data were received by the investigator until six weeks after the original questionnaires were sent. This was two weeks after the final postcard follow-up was sent. The answers were hand tabulated, with the investigator assigning numerical values to the functional status levels and the rating portion of the questionnaire. Numbers one through four were assigned to the level of functional ability, with one being totally dependent and four being totally independent. The rating categories were assigned numerical values from one to three, with one being unsatisfactory and three being excellent.

Prior to actually collecting the data, it was decided to use a statistical analysis to determine the significance of the findings. However, due to the poor response rate the statistical analysis was inappropriate. Therefore, the data were tabulated and presented in tables and the comments were quoted afterwards.

CHAPTER IV

RESULTS

The purpose of this study was to determine the subjective assessment of stroke patients rehabilitative progress and opinions about rehabilitation facilities each attended.

There were 14 questionnaires sent out to the sample group. Out of this number, 12 (86 percent) were returned. Nine (64 percent) of these were usable and three (21 percent) were deceased and the family did not wish to participate in the study. Two (14 percent) of the sample were non-respondents (Table I).

TABLE I

RETURN RATE OF QUESTIONNAIRES

	Number	Percent
Total number of possible responses	4	100
Number of responses received	12	86
Number of usable responses	9	64
Number of patients deceased-family did not wish to participate	3	21
Number of non-respondents	2	14

The patients were sent to one of three rehabilitation faciliites in Oklahoma; Hillcrest Rehabilitation Center, O'Donoghue Rehabilitation Center or Rehabilitation Institute of Oklahoma. The specific breakdown of facilities and the number of patients attending each is found in Table II.

TABLE II

NUMBER AND PERCENTAGE OF RESPONDENTS SENT TO EACH REHABILITATION FACILITY

Name of Rehabilitation Center	No. of Patients Sent	Percent of Total
Rehabilitation Institute of Oklahoma	4	44
Hillcrest Rehabilitation Center	3	33
O'Donoghue Rehabilitation Center	2	22

The respondents were assigned a number and the appropriate rehabilitation facility listed next to each one. This is found in Table III.

Due to the small sample size it was inappropriate to use a statistical analysis on the data. Therefore, the results were hand tabulated and the following comparisons were then drawn. The responses of pre-rehabilitation and post-rehabilitation functional abilities were assigned numerical values from one to four. One indicated total dependence in an area and four indicated total independence. The nursing care, therapy received and program meeting the person's needs were

rated as unsatisfactory, satisfactory or excellent. Any comments that were made in the comment section are quoted after the appropriate table.

TABLE III

RESPONDENTS IN STUDY AND REHABILITATION CENTER EACH ATTENDED

Respondent Number	Rehabilitation Center Attended
1	Rehabilitation Institute of Oklahoma
2	Rehabilitation Institute of Oklahoma
3	Rehabilitation Institute of Oklahoma
4	Rehabilitation Institute of Oklahoma
5	Hillcrest Rehabilitation Center
6	Hillcrest Rehabilitation Center
7	Hillcrest Rehabilitation Center
8	O'Donoghue Rehabilitation Center
9	O'Donoghue Rehabilitation Center

TABLE IV

RAW SCORES OF RESPONDENT NUMBER ONE FROM REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	2	2	0
Bathing	1	1	0
Dressing	1	1	0
Transferring	1	1	0
Walking	1	1	0

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Satisfactory
Therapy Received	Unsatisfactory
Program Meeting Needs	Unsatisfactory

The patient's family responded to the questionnaire and made the following comments: "They only kept her for two weeks and since she didn't make progress, they sent her to a nursing home. They didn't really give her a chance."

TABLE V

RAW SCORES OF RESPONDENT NUMBER TWO FROM
REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	1	1	0
Bathing	1	1	0
Dressing	1	1	0
Transferring	1	3	0
Walking	1	1	0

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Satisfactory
Therapy Received	Excellent
Program Meeting Needs	Excellent

This patient's wife made the following comments:

They were so nice to him down there. They always took him places and put an article in the paper about him and even put him on television. He is home now after being down there for three months. We take care of him along with the help of the public health nurse because he's weak and can't take care of himself.

TABLE VI

RAW SCORES OF RESPONDENT NUMBER THREE FROM
REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	1	1	0
Bathing	1	1	0
Dressing	1	1	0
Transferring	1	1	0
Walking	1	1	0

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Unsatisfactory
Therapy Received	Unsatisfactory
Program Meeting Needs	Unsatisfactory

The patient's only comment was that, ". . . the programs at this rehabilitation (sic) institute was totally unsatisfactory."

TABLE VII

RAW SCORES OF RESPONDENT NUMBER FOUR FROM REHABILITATIVE ASSESSMENT STUDY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	2	2	0
Bathing	1	1	0
Dressing	1	1	0
Transferring	1	1	0
Walking	1	1	0

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Excellent
Therapy Received	Excellent
Program Meeting Needs	Satisfactory

This patient wrote the following comments:

My walking ability is due to my therapy at Stillwater Medical Center. I didn't like having to spend most of my time waiting for therapy at the rehabilitation center, but the therapy was good. I didn't like the food because it was mostly starch based.

TABLE VIII

RAW SCORES OF RESPONDENT NUMBER FIVE FROM REHABILITATION ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	1	2	1
Bathing	1	2	1
Dressing	1	2	1
Transferring	1	2	1
Walking	1	2	1

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Unsatisfactory
Therapy Received	Excellent
Program Meeting Needs	Satisfactory

The patient's wife completed the questionnaire and wrote the following comments:

> When (he) went to Hillcrest (on 12th day after initial stroke, March 14, 1980), he didn't even know he has been transferred. When he left he was able to walk with quad cane with assistance. He is not verbal--comprehension is good but expression is not. He was almost able to totally dress himself. He has suffered numerous strokes since--the last bad one was on October 3, 1983. Several TIAs. He is now a patient at Westhaven Nursing Home.

Last December 1981 he fell and had a total hip replacement. This was on the weak side so of course never healed properly. He is now a bed patient and is nearly totally dependent on someone for his care. He is also a seizure patient. He has 2/3 damage to the left half of the brain and between 1/4 and 1/3 on right side. His condition is guarded.
I do personally recommend Hillcrest for their rehabilitation program. But their nursing care is the worst I have ever witnessed. Also verbal and physical abuse by nurses and aides. (My husband) has been in the hospital a total of nine months in the past 3 years. This includes four hospitals. Except for the fact that we do not have a neurologist in Stillwater, our hospital is still the best over all.

TABLE IX

RAW SCORES OF RESPONDENT NUMBER SIX FROM REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	2	2	0
Bathing	1	1	0
Dressing	1	1	0
Transferring	1	1	0
Walking	1	1	0

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Satisfactory
Therapy Received	Unsatisfactory
Program Meeting Needs	Unsatisfactory

The patient wrote no comments about the rehabilitation facility or staff.

TABLE X

RAW SCORES OF RESPONDENT NUMBER SEVEN FROM REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	2	3	0
Bathing	1	1	0
Dressing	1	1	0
Transferring	2	4	2
Walking	2	3	1

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Excellent
Therapy Received	Excellent
Program Meeting Needs	Excellent

The patient had no comment about the rehabilitation facility or staff.

TABLE XI

RAW SCORES OF RESPONDENT NUMBER EIGHT FROM REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	2	3	1
Bathing	1	2	1
Dressing	1	2	1
Transferring	2	4	2
Walking	1	3	2

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Unsatisfactory
Therapy Received	Unsatisfactory
Program Meeting Neets	Unsatisfactory

The patient wrote the following comments on his questionnaire:

I was referred and accepted to the above named facility (O'Donoghue) long before I was ready or capable of complying with daily routine of facility.
According to rules and regulations of facility one must actually be mobile and responsible for one's own personal needs, before being admitted there. Neglectful, inconsiderate, very poor nursing care was my experience because they did not know how to cope with my mental and physical problems.

TABLE XII

RAW SCORES OF RESPONDENT NUMBER NINE FROM REHABILITATIVE ASSESSMENT SURVEY

Skill	Pre-Rehabilitation	Post-Rehabilitation	Difference
Eating	2	3	1
Bathing	1	2	1
Dressing	2	4	2
Transferring	3	4	2
Walking	2	4	2

Key - Eating, Bathing, Dressing, Walking

1 = total dependence in this activity
2 = requires some physical assistance to complete this activity
3 = able to complete this activity using assistive equipment
4 = totally independent in this activity

Transferring

1 = totally dependent in transfers from bed to chair
2 = transfer from bed to chair with help from two people
3 = transfer from bed to chair with help from one person
4 = independent in transfer from bed to chair

Staff Performance Category	Rating
Nursing Care	Satisfactory
Therapy Received	Excellent
Program Meeting Needs	Excellent

The patient wrote the following comments:

I was very pleased and impressed with the facility and would do it again, knowing what I know now. I highly recommend it to anyone needing the service. I was also impressed and pleased with the therapy I received at Stillwater Medical Center before and after O'Donoghue.

The question of post-rehabilitation placement was raised after several of the members of the sample population were found to reside in nursing homes. Table XIII documents the post rehabilitation settings where the patients now reside.

TABLE XIII

ANALYSIS OF POST REHABILITATION PLACEMENT OF STROKE PATIENTS DISCHARGED FROM STILLWATER MEDICAL CENTER FROM JANUARY 1980 THROUGH JANUARY 1983

Post Rehabilitation Discharge Setting	No. of Patients	Percent of Total
Independent at home	1	7
Home with assistance of family	1	7
Home with nursing care being provided	4	29
Nursing home	4	29
Expired	3	21
Unknown	1	7

The tabulated data has interesting applications for patient treatment programming and discharge planning. It will be summarized and analyzed in Chapter V.

CHAPTER V

SUMMARY AND CONCLUSIONS

The discussion which follows includes: (a) a summary of the purpose, procedures and (b) findings, conclusions and recommendations regarding the data.

The purpose of this study was to describe the subjective assessment of rehabilitative progress and to gather opinions from stroke patients discharged from Stillwater Medical Center to rehabilitation facilities in Oklahoma. The process for the study was as follows: (a) the survey instrument was conceptualized and designed; (b) the sample population was determined and identified; (c) the questionnaire was administered; (d) the data were tabulated and analyzed by hand, and (e) conclusions concerning the problems were drawn based on the results of the data analysis.

Conclusions

The conclusions in this study may not be generalized to populations other than the sample group. However, the conclusions provided useful information for the discharge planning team at Stillwater Medical Center.

The results indicated that transfer to rehabilitation facilities was valuable for patients who were able to already assist with

functional activities. Patients who were totally dependent in functional activities demonstrated little improvement in their abilities after rehabilitation.

There is a great deviation in subjective judgments of nursing care, therapy received and program meeting the needs of the patient. Due to this deviation, one of the folowing conclusions may be drawn. One is that there is a wide variety of quality in these areas, perhaps due to the constant change of personnel or the day-to-day personality changes of individuals working with these patients. Second, it could be that without specific criteria to make the judgment of unsatisfactory, satisfactory or excellent each person judges these differently. Third, it could be that there is a substandard level of nursing care in these facilities.

Based on this study, the following recommendations may be made:

1. Although the survey served the purpose of finding the opinions of stroke patients discharged from Stillwater Medical Center, the small number in the sample limited the statistical significance of the findings. There is a need use this survey on a larger patient population and this is presently being discussed with staff members from a 450-bed acute medical facility.
2. If this study is repeated, it is recommended that the geographic location of the patient population be identified prior to making the decision of using a mail questionnaire or personal interview. If the geographic distribution is within a manageable area, one may use personal interview to improve the response rate.

3. It is recommended that the acute medical faciliites closely evaluate the medical condition and functional abilities of stroke patients prior to discharge planning. For instance, at Stillwater Medical Center, the discharge team needs to be aware of specific criteria, in terms of functional abilities, one must have before admission for rehabilitation. This would provide some objective guidelines to follow in discharge planning rather than relying on subjective judgments. The rehabilitation facility also plays a crucial role in the discharge planning. If a patient is inappropriate for admission, it is the duty of the facility to reject the appliacnt, rather than emotionally traumatize the patient by a distant transfer to the facility, deplete the patient's finances and then return him to the local community after little or no progress has been made.
4. It is recommended that the discharge team discuss the patient's and family's expectations of the rehabilitation center with them. This may involve a review of reports from other patients attending the facility and a visit to the facility to discuss these with the staff prior to making the decision regarding admission to the center.
5. It is recommended that the patients who are transferred to rehabilitation facilities from Stillwater Medical Center in the future are also followed up using the same questionnaire used in this study. This will allow the discharge team to modify its recommendations to other patients as appropriate.

6. It is recommended that there be some intermediate facility available for care of stroke patients who are too functional to need a nursing home and yet too weak physically to benefit from intensive rehabilitation program. There is the LIFE (Living Improvement for Elderly) that provides day care and therapy, but has no facilities for nursing care.
7. It is recommended that the discharge planning team consider the emotional impact of a transfer to a facility over 50 miles away on the patient and family before making the decision to admit the patient to a rehabilitation center.

Since the completion of this study, there have been several changes made in discharge planning for stroke patients at Stillwater Medical Center. The criteria for admissions to the rehabilitation facilities have been requested and will be utilized in the discharge planning process. There are also formal discharge planning sessions for all medical patients involving nursing, therapists, social worker, patient representative, physician, patient and family.

The study has raised many questions; do the patients in our particular facility need to be sent to rehabilitation facilities? In many cases the care may be provided on a community based level utilizing the family to care for the patient in the evenings and utilizing the LIFE Center for rehabilitation during the day. It is less of an emotional strain because the patient does not need to separate from friends family and familiar surroundings. Patients having no family or friends able to care for them may be sent to rehabilitation

facilities or placed in a local nursing home in the evening and transferred to the LIFE Center during the day for therapy.

Another question is what is the purpose of rehabilitation? If it is to improve one's functional abilities, how much does one need to improve in order to judge his/her progress as satisfactory? If the progress is minimal, as with several patients in the study, is this a cost effective treatment? Can one place a monetary value on improvement in quality of life, even if it is a minimal one?

These are questions that are becoming more important to consider. In times of economic hardship one must consider money being spent, yet not overlook the development of full potential of each individual. This is the challenge for the dischrage planning team. Hopefully, as more options for treatment are found, such as the LIFE Center, the discharge settings will be better able to meet the patient's needs.

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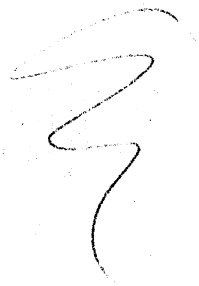
APPENDIX



STILLWATER MEDICAL CENTER
BOX 1008, STILLWATER, OKLAHOMA 74074/PHONE 405-372-1480

February 24, 1983

Dear

Stillwater Medical Center often refers patients who have had strokes to rehabilitation centers for therapy. We are interested in finding out if you made progress in the rehabilitation center, and if you thought the experience was worthwhile.

This information will benefit stroke patients that we see in the future. If you feel you made progress during rehabilitation, and that it was worthwhile then we will continue to send patients to the rehabilitation centers. If not, we will investigate other ways for patients to receive therapy.

Your response will remain strictly confidential. If you receive help completing this survey by a family member or friend, please note this at the end of the survey. You may at any time discontinue your participation in this study. If you choose to do so, return your survey anyway.

Thank you for your help in improving our services to the Stillwater community. You may return your response in the enclosed envelope.

Sincerely yours,

Lynn Witzen OTR
Chief Occupational Therapist

REHABILITATION STUDY

DIRECTIONS

Please circle the response that most applies to you. Feel free to write a comment after any question.

PRE-REHABILITATION

What were you able to do for yourself before rehabilitation?

1. Eating
   - A. able to eat, cut meat without any help
   - B. able to eat, cut meat with special knife
   - C. able to eat, but needed someone to cut meat
   - D. unable to eat without someone feeding me
2. Bathing
   - A. able to bathe totally without any help
   - B. able to bathe totally using special equipment
   - C. able to bathe paritally but needed some help
   - D. someone had to totally bathe me
3. Dressing
   - A. able to dress without any help (in pajamas, street clothes)
   - B. able to dress, but using special equipment
   - C. able to dress partially, but needed help
   - D. needed someone to totally dress me
4. Transferring
   - A. able to transfer from bed to chair without help
   - B. able to transfer from bed to chair with help from one
   - C. able to transfer from bed to chair with help from two
   - D. unable to help with transfers at all

5. Walking

   A. able to walk without help

   B. able to walk with cane or walker or use wheelchair

   C. able to walk or use wheelchair with help from someone

   D. someone needed to put me in a wheelchair, push me

Now that you're home what are you able to do for yourself?

6. Eating

   A. able to eat, cut meat without any help

   B. able to eat, cut meat with special knife

   C. able to eat, but needed someone to cut meat

   D. unable to eat without someone feeding me

7. Bathing

   A. able to bathe totally without any help

   B. able to bathe totally using special equipment

   C. able to bathe partially but needed some help

   D. someone had to totally bathe me

8. Dressing

   A. able to dress without any help (in pajamas, street clothes)

   B. able to dress, but using special equipment

   C. able to dress paritally, but needed help

   D. needed someone to totally dress me

9. Transferring

   A. able to transfer from bed to chair without help

   B. able to transfer from bed to chair with help from one

   C. able to transfer from bed to chair with help from two

   D. unable to help with transfers at all

10. Walking

A. able to walk without help

B. able to walk with cane or walker or use wheelchair

C. able to walk or use wheelchair with help from someone

D. someone needed to put ne in a wheelchair, push me

Name of Rehabilitation Facility _____

Rate these categories. Check the appropriate space to rate the rehabilitation facility you attended. If unsatisfactory please explain on back.

	Unsatisfactory	Satisfactory	Excellent
NURSING CARE	_____	_____	_____
THERAPY RECEIVED	_____	_____	_____
DID THE PROGRAM MEET YOUR NEEDS?	_____	_____	_____

PLEASE FEEL FREE TO MAKE ANY ADDITIONAL COMMENTS BELOW OR ON BACK OF QUESTIONNAIRE.

VITA

LYNN KENLY WITZEN

Candidate for the Degree of

Master of Science

Thesis: A DESCRIPTIVE STUDY OF STROKE PATIENTS DISCHARGED FROM STILLWATER MEDICAL CENTER TO REHABILITATION FACILITIES IN OKLAHOMA

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