

OPINIONS OF 70 SELECTED INDIVIDUALS CONCERNING THE
ROLE OF THE NURSE IN THE REHABILITATION OF
PARAPLEGIC PATIENTS AS OBTAINED BY
INTERVIEW AND QUESTIONNAIRE

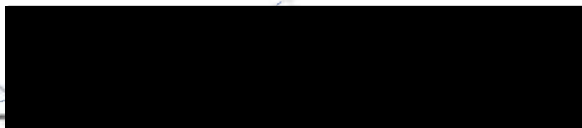
by

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PREFACE

This study was written to provide information regarding the opinions of selected individuals concerning the role of the nurse in the rehabilitation of paraplegic patients. It became apparent to the author through reading and experience that these patients have many needs. It is hoped that the findings of this study will enable nurses to understand and interpret to others their role in the care of these patients.

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CHAPTER I
INTRODUCTION

Introduction to the Problem

The modern concept of rehabilitation has been generally accepted in the United States only in the last two decades. This does not mean, however, that the idea of rehabilitation is new or that rehabilitation has not been carried on. For some time it has been recognized that the emphasis now placed on the restoration of the physically handicapped person to a useful life is a much broader concept than held in the past. The scope of rehabilitation has also broadened to include many services not previously available.

The interest in rehabilitation died out in most quarters after World War I. About 400 veterans who became paraplegic during World War I died within the first year after injury generally from urinary infections and other involvements indirectly resulting from the paralysis.⁽¹²⁾ Almost all of these veterans were bedridden during the months they survived. The mortality among paraplegic veterans indicated the need for effective, scientific medical and nursing care, and rehabilitation programs

planned to meet their individual needs. Stress at that time was on vocational training and guidance.

The emphasis on rehabilitating patients was revived in 1942, under the direction of Colonel Howard A. Rusk. The Convalescent Training Program was initiated at that time in the United States Army Air Force hospitals. One of the goals of the program as set up by Colonel Rusk was to recondition the personnel of the Air Corps who were sick or disabled. The philosophy that guided the program was stated by Rusk in the following quotation, "the debt of disability shall be paid in the currency of opportunity."⁽³⁹⁾ During the next three years reconditioning programs began in Army Ground Force hospitals and in Navy hospitals.

It became evident that such programs were needed in the Veterans Administration hospitals. In 1946 rehabilitation programs began there under the direction of Dr. Donald A. Covalt.⁽²⁹⁾ It was in these hospitals that programs were set up to rehabilitate paraplegic veterans and to help them readjust to civilian life.

During World War II medical units had to face the problem of 2,500 military personnel with spinal injuries.⁽¹¹⁾ Up to this time there had been a feeling that little was possible in the rehabilitation of such patients. It was found that remarkable results could be

attained by the united effort of all those who were involved in the care and rehabilitation of paraplegic patients. No longer were these patients to be considered helpless invalids for the duration of their lives.

According to Muir⁽³¹⁾ there were eight civilian paraplegic persons for every one veteran paraplegic that was produced by World War II. There were increased numbers of persons who became paraplegic as the result of industrial accidents, car accidents, and disease conditions. These individuals presented rehabilitation problems to all who were involved in their care.

The members of the "health team" became increasingly more conscious of the need for using rehabilitative methods. Little was known about the limitations or scope of the nurse's role in the rehabilitation of paraplegic patients until recently.

Statement of the Problem

Rehabilitation is defined as "the restoration of the handicapped to the fullest physical, mental, social, vocational, and economic usefulness of which they are capable."⁽⁴⁾ There are those who are of the opinion that the nurse has a definite role to play in the rehabilitation of paraplegic patients. Phillips states, "Too many times the nurse as a member of the patient-care team has not been

aware of the role that she should play, nor have many of the other members of the team felt that the nurse's part was at all vital."⁽³⁵⁾ It would appear that the nurse has not always been aware of her status as a member of the "health team." The rehabilitation of paraplegic patients must begin with the onset of the disability.⁽⁴⁴⁾ In giving nursing care to paraplegic patients, the nurse needs to know not only the basic principles of rehabilitation and rehabilitative measures but also to understand her role in carrying out these principles. This study ~~will~~ ^{was} be undertaken to determine the opinions of 78 selected individuals concerning the role of the nurse in the rehabilitation of paraplegic patients as obtained by interview.

Purpose

The purpose of this study is two-fold.

1. From the opinions of a selected group of individuals associated in various phases of rehabilitation of paraplegic patients the following information is to be obtained:

- a. What concepts of rehabilitation are in evidence?
- b. At what phase of illness does the rehabilitation process begin?

- c. What members of the medical and allied professions should compose the "health team" in the rehabilitation of paraplegic patients?
- d. What is the role of the nurse in the rehabilitation of paraplegic patients?

2. To determine the agreement, if any, between the information obtained and the current concepts of rehabilitation and the role of the nurse in the rehabilitation process as reported in the literature.

Justification for the Study

The initiation of rehabilitative measures early in the illness of paraplegic patients has been pointed out. If this is to be accomplished, nurses are in a strategic position for contributing to the rehabilitation of paraplegic patients. In the hospital the nurse is responsible for continuous care of paraplegic patients and is in contact with these patients over a longer period of time than other members of the "health team." In the community the public health nurse may see paraplegic patients more often than the doctor. The nurse has a unique opportunity for helping paraplegic patients achieve and maintain a state of good health which will enable them to participate in a rehabilitation program. In endeavoring

to participate in the comprehensive care of paraplegic patients the nurse ministers to physical, spiritual, psychological, emotional, social, and vocational needs. The nurse in the hospital and in the community may coordinate and cooperate with the services of the doctors, occupational therapists, physical therapists, social workers, and others working with paraplegic patients. It is apparent that there are many nursing care problems presented by paraplegic patients and that these patients have definite rehabilitative needs, some of which may be met by the nurse.

The findings of this study may be of value to nurses assigned to the care of paraplegic patients and to other professional personnel working in cooperation with nurses in the rehabilitation of these patients. The findings may be helpful to those considering the nurse's function in the care of paraplegic patients with emphasis on their rehabilitation. The data obtained may enable nurses to interpret their role in the rehabilitation of paraplegic patients to others.

Assumptions and Delimitations

For the purpose of this study it will be assumed that:

1. The nurse has a role in the rehabilitation of paraplegic patients.

2. The nurse is a member of the rehabilitation team.
3. The individuals interviewed will give their own opinions concerning the role of the nurse in the rehabilitation of paraplegic patients.
4. These opinions will be of value and interest to nurses and nurse educators.

The persons selected for the interviews will be on the basis of past or present experience in the rehabilitation of paraplegic patients. Sixty-nine individuals will be representatives of seven disciplines commonly considered to be constituents of the "health team." These disciplines are medicine, professional nursing, allied professions including social work, occupational therapy, physical therapy, and clinical psychology, and vocational counseling. Of the remaining persons to be interviewed, eight will be handicapped persons and one an individual who secures the necessary equipment and prosthetic devices used by paraplegic patients. All of the interviewing will be confined to Portland and adjacent suburban areas.

Procedure

The sources of data are as follows: 1. opinions obtained by interviews conducted with 78 selected individuals, 2. publications and periodicals of professional nursing organizations, 3. medical and nursing

textbooks, 4. monographs and books written by persons in medical, nursing and allied professions, 5. books written by paraplegic persons, and 6. mimeographed materials from the Institute of Physical Medicine and Rehabilitation, New York University, Bellevue Medical Center, New York City, New York.

A single page interview guide was prepared to be used at the time of the interview. The guide was concerned with obtaining information relative to the interviewee's functions in the rehabilitation of paraplegic patients, to determine the interviewee's opinions of the role of the nurse in the rehabilitation of paraplegic patients, the services offered by the hospital or other agency in which the individual worked, and the agencies used in referral of paraplegic patients by the interviewee and by the agency in which the interviewee worked.

The selection of the interviewees was made in view of past or present experience in the rehabilitation of paraplegic patients and as representatives on the "health team." Interviews were conducted with the participants selected for this study. Information was obtained from the interviewees according to provisions of the interview guide. It was deemed necessary to obtain further information concerning the interviewee's concepts of "rehabilitation" and "health team," and perceptions of the

terms "role," "nurse," and "nursing." A check-list questionnaire was submitted to the participants of the study to gain this information. Data obtained from the interviews were compared with data received from the questionnaires. Summarization was made of data. Interpretation was made and conclusions were derived as they pertained to the purpose of this study.

Definition of Terms

For the purpose of clarification the following definitions will be used throughout this study:

1. Activities of daily living are all the activities that are done from the time the individual wakes up in the morning until he goes to sleep at night. (25) It has been estimated that there are 99 daily activities that a person must be able to perform for himself in order to meet the demands of daily living. (5)

2. The words disability and handicap will be used interchangeably in this study meaning any physical defect or abnormality which impairs the individual's ability to earn his livelihood or perform social functions and which may temporarily or permanently change his role and status in his family, in his vocation and in his community. (45)

3. The term nurse will mean a professional registered nurse. The licensed practical nurse, nurse aide

or attendant, and student nurse will be indicated as such. The term nurse as used in this study may be in reference to one employed in any of the various fields of nursing, such as hospital, industry, private duty, or public health.

4. The health team is the entire group of persons who, by virtue of their education and/or employment, contribute in some way toward the total recovery of the patient, whether it be physical, psychological, emotional, spiritual, social, or vocational. (24) Inherent in the concept of team work in patient care is the recognition that the patient's doctor is captain of the team and the nurse the coordinator. (29) The nurse coordinates and interprets the services of the various members of the team to the patient and the patient's family and in turn interprets the needs of the patient to the team members. (24)

5. Nursing in its broadest sense may be defined as an art and a science which involves the whole patient-- body, mind, and spirit; promotes his spiritual, mental and physical welfare by health teaching and by example; emphasizes health education and health preservation, as well as ministration to the sick; involves the care of the patient's environment--social and spiritual as well as physical being; and gives health service to the family and community as well as to the individual. (33)

6. Paraplegia is the disability that occurs as a

result of paralysis of both lower extremities, and more or less of the trunk, due to injury or disease of the spinal cord and involving the functioning of all organs from the affected area on down. (17) A paraplegic patient is one suffering from paraplegia.

7. Rehabilitation has been defined as "the restoration of the handicapped person to the fullest physical, psychological, social, vocational, and economic usefulness of which he is capable." (4)

8. Role has been defined as "the complex behavior that is expected of one who occupies a given position." (42)

Overview of Thesis

This study attempts to determine by interview and questionnaire the opinions of 78 selected individuals concerning the role of the nurse in the rehabilitation of paraplegic patients, the concepts of rehabilitation in evidence, the phase of illness in which rehabilitation begins, what members of the medical and allied professions should compose the "health team," and the agreement, if any, between the information obtained and the current concepts of rehabilitation and the role of the nurse in the rehabilitation process as reported in the literature.

CHAPTER II

SURVEY OF LITERATURE AND RELATED STUDIES

Historical Background of Rehabilitation

The attitude of society toward handicapped persons has passed through five stages. In the first stage the handicapped persons were exterminated from their primitive society or were banished for economic reasons. The principle aim of the society was safety. Only the swift and strong survived. The handicapped were too weak in body and too slow of foot to be permitted to interfere with life activities. The primitive people believed that evil spirits caused the deformity or disability. Nevertheless, attempts were made to relieve pain and discomfort by using splints on the side of an injured limb which gave considerable relief. The function of crutches was known in ancient days. The earliest record of crutches used was portrayed on an old Egyptian tomb about 2,830 B.C. (10)

Hippocrates in his book On Surgery (1) was the first to expound on the basic principle of rehabilitation. He stated, "It should be kept in mind that exercise strengthens and inactivity wastes." In his writings descriptions may be found of the first attempts to treat deformity and disability so his patients could be restored

to useful lives.

During the time of the Old and New Testament those who were maimed, deformed, or paralytic could be found in streets begging for alms. Such an incident is recorded in the New Testament. Peter and John seeing a lame man outside of the temple begging for alms performed a miracle of healing on him. At this time there were institutions for the sick but very few for the care of the physically disabled.

The second stage in the development of society's attitude toward the handicapped occurred during the Middle Ages. The handicapped were allowed to live but were ostracized and looked upon with contempt and ridicule. Physical deformity was considered evidence of divine punishment for sin and had to be accepted. Little was done to help the disabled.

Ambroise Paré (1510-1590), a Frenchman and great humanitarian, was anxious to do what he could to achieve a complete and total cure for his patients. In one of his writings there was an account of his performing an amputation and carrying the patient through the surgery until completely rehabilitated with an artificial limb. (34)

The third stage of development of society's attitude toward the handicapped began in 1601 when the British Poor Relief Act was passed making the care of the disabled a

matter of law rather than charity. Up to this time begging had been condoned. Permission had been given by law for the handicapped to beg for alms. Until this time charity and relief to the poor and handicapped had been a function of the church. The Poor Relief Act outlawed begging and attempted to make provision for treatment and relief of the disabled.

Society gradually became more conscious of the needs of the disabled. The earliest organized social interest shown in behalf of the disabled took place in the eighteenth century. There was a growing social consciousness in the various countries of Europe. In this fourth stage of development of society's attitude toward the handicapped, institutional care was provided in monasteries that had been abandoned during the Reformation. (17) Shelter and food were provided but there were no provisions for education, medical care, or vocational training.

Two individuals instrumental in further enlightening the social concept of the treatment of the handicapped were Agnes Hunt and Sir Robert Jones in England. At the turn of the twentieth century they organized an orthopedic hospital, an after-care system, and developed the Cripples' Training College which was for the vocational training of the handicapped. (22)

Society began to realize the need for helping the disabled. Society became aware of the necessity of not only providing care and education but also for offering the handicapped opportunities to become self-supporting members of the community. This began the fifth stage in the development of society's attitude toward the handicapped in which handicapped persons were educated and rehabilitated.

Much work was done in United States in the first decade of the twentieth century to acquaint the public with the needs of the handicapped. Agencies were organized and attempts were made to bring them together in a cooperative relationship. Legislation was passed in 1912 creating the Federal Children's Bureau.⁽²²⁾ Various states passed laws providing medical and educational programs for the handicapped children.

World War I gave impetus to the rehabilitation of the handicapped. Jeremiah Milbank and Douglas C. McMurtie, interested in the problem of the physically handicapped, felt that there should be special training for the civilian disabled as well as the war-disabled to help restore them to normal status in the community. In 1917 Jeremiah Milbank was instrumental in the establishment of the Red Cross Institute for Crippled and Disabled Men in New York City now known as the Institute for the Crippled

and Disabled. (18)

In 1917 the Smith-Hughes Act created a federal system for vocational education. Under the Act federal grants were given to the states to provide vocational guidance and training and placement services to the civilian handicapped. There was no provision for the physical restoration of the disabled, nor was there any mention of the vocational rehabilitation of the disabled soldiers and sailors. On June 27, 1918, the Vocational Rehabilitation Act was enacted. It provided for the vocational rehabilitation and the return of veterans to civilian employment. (7)

About this time a few state governments began to realize their responsibility to adults and established workmen's compensation laws. The laws assured the worker, injured in industry, adequate medical treatment, partial financial reimbursement for loss of salary, and in case of permanent injury, financial compensation for loss of earning power. (8,9) These laws did not, however, help those who were physically handicapped at birth or were handicapped as the result of disease or nonindustrial accident.

Between World War I and World War II there were other laws passed for the rehabilitation of the disabled. During this time the Red Cross Institute for Disabled Men continued in its work. Other rehabilitation centers began

to be established including the Goodwill Industries, and the Curative Workshop for the Disabled.

After the onset of World War II there was an urgent need for establishing convalescent programs for the sick or disabled personnel in the Army Air Force. It was found that the length of hospitalization was reduced. The programs consisted of "passive bed exercises, early ambulation, graduated exercises, and work therapy." (29) The Army and Navy soon followed with programs in reconditioning. The training of personnel to carry on the programs took place at the Institute for the Crippled and Disabled. (40)

It became apparent to the federal government that rehabilitation of service men would be the major work of the Veterans Administration. Under the direction of Dr. Donald A. Covalt, medical rehabilitation programs were established in the Veterans Administration hospitals. (29)

The passage of the Barden-La Follette Act in 1943 extended the federal government's rehabilitation program by providing grants-in-aid to the states for medical services. These services were designed to help the handicapped become employable. The government's program in rehabilitation had been limited previous to this time to the education, vocational training, and the employment of the handicapped.

Early in 1944, a grant was given by the Baruch Committee in Physical Medicine for the establishment of a division of physical medicine at Bellevue Hospital in New York City. The former director of the Institute for the Crippled and Disabled, Dr. George C. Deaver, was in charge. In 1947 the department name was changed to the Department of Rehabilitation and Physical Medicine and Rehabilitation Service. (29)

Within Bellevue Hospital, two forty-bed wards were set up to provide medical rehabilitation for disabled patients. The program as established assured that rehabilitation would become a part of medical and nursing care of the patients. (29,38)

About four years later the Institute of Physical Medicine was built and came under the direction of Dr. Howard A. Rusk and assistant director, Dr. Donald A. Covalt. Dr. George C. Deaver became the Director of the Children's Division. Patients were admitted to the Institute either as inpatients or outpatients thus being able to receive the benefits of complete rehabilitative services.

The federal government recognized the value of the physical rehabilitation programs carried out in the armed forces and established a system of rehabilitation centers for paraplegics, for the blind, for the tuberculous, and

others. The technics of physical restoration, vocational guidance, and prevocational training were carried out. Seven paraplegic centers were established by the Veterans Administration to serve the 2,500 paraplegic veterans of World War II. (21)

Modern Concepts of Rehabilitation

The word "rehabilitation" first appeared in the literature in 1918. It was in 1943 that the National Council on Rehabilitation adopted this definition: "Rehabilitation is the restoration of the handicapped to the fullest physical, mental, social, vocational, and economic usefulness of which they are capable." (4) This definition has been generally accepted.

There are two viewpoints in regard to rehabilitation. To some rehabilitation is that concentrated phase of physical restoration, vocational testing, and the like to be given to a selected group of patients. (15) To others rehabilitation is inherent in good medical care to the effect that all individuals should be rehabilitated to the extent that their conditions will allow or will demand. (21) These viewpoints may depend upon whether the individual is in a rehabilitation center, hospital situation, or in the community. However, the present trend is toward the concept of the rehabilitation as one in which

rehabilitation is considered as starting at the onset of disability and extending out into the community to which the patient returns. The modern philosophy emphasizes the wholeness of the individual consisting of body, mind, and spirit. This philosophy also emphasizes the acceptance of the person with his disability though the individual may have numerous problems. (27,29)

In Figure 1 total rehabilitation is represented by a chain of four links. Each link is interdependent upon the other. The total rehabilitation is composed of medical care, physical rehabilitation, vocational training, and the employment of the handicapped person.



Figure 1

CONCEPT OF TOTAL REHABILITATION^a

^aData from Larson, Carroll B. and Gould, Marjorie. Calderwood's Orthopedic Nursing. 4th Ed., Revised. St. Louis: The C. V. Mosby Company, 1957. p. 61.

The basic needs of the handicapped person do not differ from those of the able-bodied person. Before the goals of the rehabilitation of a handicapped person can be established, the individual's abilities, capacities, skills, and aptitudes must be taken into consideration.

The physical disability may well limit the goals for the individual. All handicapped individuals are not equally capable of complete rehabilitation. In physical rehabilitation, the goal of rehabilitation may be that of assisting the individual to become independent in his activities of daily living. These activities of daily living constitute everything that the individual does from the time he awakens and gets out of bed until the time he gets back into bed. In cases of severe disability this may be modified to include those activities which the patient is capable of performing for himself. Another goal is increased social participation in working and getting along with others. The vocational goals may be partial employment, self-employment in the home, or sheltered workshop. Another vocational goal may be full employment. All goals are dependent upon the individual and his disability. Figure 2 portrays the goals of rehabilitation.

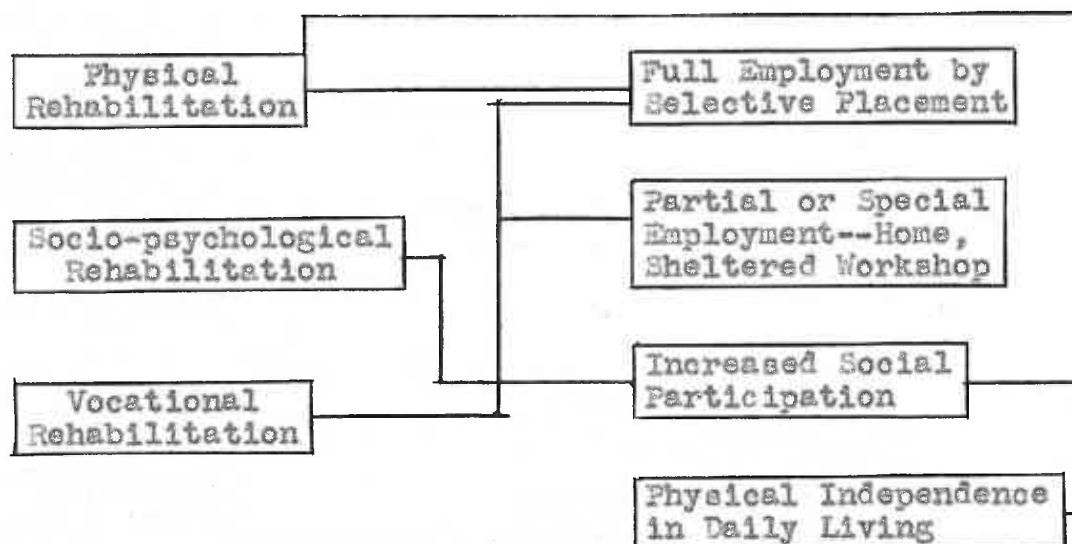


Figure 2

GOALS OF REHABILITATION^a

^aData from Institute for the Crippled and Disabled. Rehabilitation Trends Midcentury to 1956. New York: The Institute, 1956. p. 15.

The Commission on Chronic Illness made the following statement about rehabilitation:

Rehabilitation is an innate element of adequate care and properly begins with diagnosis. It is applicable alike to persons who may become employable and to those whose only realistic hope may be a higher level of self-care. Not only must formal rehabilitation services be supplied as needed, but programs, institutions, and personnel must be aggressively rehabilitation-minded. (8)

Rehabilitation is an investment in human welfare and some of the results cannot be measured because they are the intangibles of human values. One result that can be measured is the financial saving which rehabilitation produces. In cases where disabled persons have been

supported by public funds, rehabilitation of handicapped persons may reduce the amount of funds needed in their support. In 1953, 11,000 of 61,308 persons disabled were rehabilitated to the extent that they could be placed in useful occupations. The costs to maintain disabled persons receiving public assistance were estimated at \$8.7 million. The costs for the rehabilitation program for these disabled persons were about \$6.4 million.⁽⁸⁾ This group of disabled persons would pay an estimated \$30 million in income tax over a three-year period.⁽⁸⁾

Rehabilitation in the modern concept has many settings. "Rehabilitation should be going on in some form at all times wherever the patient may be--at home, in a hospital, in a nursing home, in a rehabilitation center, and in a physician's office,"⁽⁸⁾ according to the Commission on Chronic Illness.

There are a few general hospitals that have within them an organized effort for the rehabilitation of disabled patients. In 1950 the Commission on Chronic Illness questioned 2,600 general hospitals having 50 or more beds concerning organized rehabilitative services. The Commission defined these services as those which "study patients with residual handicaps and disabilities due to illness or accident and provide training and therapy to help the patient adjust to, compensate for, or overcome

the disability."(8) There were 1,699 hospitals that responded; 65 reported that they had such services in operation. Of the hospitals responding, 18 had separate wards allocated for the rehabilitation of patients, 47 did not segregate rehabilitation patients. Not all of the hospitals were large; 23 of the hospitals had less than 250 beds.

It is recognized that rehabilitation services are appropriate to smaller hospitals as well as larger institutions. A project was undertaken in 1954 by the University of Buffalo School of Medicine and its Rehabilitation Center. It was the intention of the University of Buffalo School of Medicine to disseminate knowledge of rehabilitation in its broad sense to the smaller hospitals in the area and to "demonstrate the applicability of the rehabilitation concept to all types of illness and disability regardless of degree of severity and its usefulness in all kinds of hospitals and its significant place in day to day medical practice."(8) To implement the plan a comprehensive regional educational program was developed.

The Commission on Chronic Illness stated:

Not only do hospitals fail to see that the best practices are applied within their own walls, but they neglect rehabilitation when they discharge patients without ascertaining that they will be cared for in a way that will

permit maintenance of their gains. This kind of neglect occurs even in communities where the needed services are available to the indigent as well as to those who can pay.

.....

Hospitals should be aware of the retrogressions which can occur following discharge; and they should know and help the patient to find the community resources which he will need at home. (8)

A survey of rehabilitation centers was conducted in 1953 by the Commission on Chronic Illness and the National Society for Crippled Children and Adults. The services offered by the centers covered three principle areas, namely, medical, psycho-social, and vocational. The rehabilitation centers reporting were classified in six ways: 1. teaching and research centers, 2. centers located in and operated by hospitals and medical schools, 3. community centers with facilities for inpatients, 4. community outpatient centers, 5. insurance company centers, and 6. vocational rehabilitation centers.

A description of comprehensive centers is given by Switzer and Rusk in the pamphlet, Doing Something for the Disabled:

They combine within one organization the facilities and processes for moving the disabled persons as far as possible along the road from the hospital bed to productive employment.

They provide a coordinated approach to the evaluation of the patient's condition and the

prognosis of the degree and character of his physical and vocational restoration.

They are not hospitals, schools, or industries but partake of the characteristics of all these.

They are a [sic] tool for use by all social agencies, by the medical profession, and by representatives of groups who are interested in the fullest possible rehabilitation of its citizen.

They are patient-centered in that, around the problems and prospects of the patient, there is formed a program in which each of the professional and non-professional services--such as medical care, physical therapy, occupational therapy, speech and hearing therapy, social work, adult education, vocational counseling, and psychological services--function simultaneously.

The rehabilitation center supplements rather than supplants the physical medicine and rehabilitation activities and programs of hospitals and other agencies within the community. Centers by themselves cannot meet the entire community need for rehabilitation services, but by their existence they increase the quality and quantity of the work performed by other rehabilitation agencies which focus on special aspects of the entire problem. (43)

Paraplegia and the Problems of the

Paraplegic Patient

Paraplegia is the disability that occurs as the result of injury or disease of the spinal cord and is accompanied by the loss of motor power, sensation in the legs, loss of sexual function, loss of bladder and bowel control. There are a number of ways in which the spinal

cord may be damaged. Hemorrhage, tumors, splinters from vertebral fractures, and fractures of the vertebral body may compress the cord. Gunshot wounds, industrial injuries, and car accidents may cause traumas to the cord. An acute inflammatory condition such as transverse myelitis or diseases of the nervous system such as anterior poliomyelitis and disseminated sclerosis may cause paraplegia. The spinal cord is described as a great artery of communication. The brain responds to every wish and desire that may be voluntary or involuntary. Messages are sent to the brain, organs, and extremities via the spinal cord. If there is an interruption or obstruction of the motor and sensory fibers destroying their continuity, the messages and impulses will not be transmitted and therefore cannot be translated into motion. The amount of damage done to the spinal cord will determine the extent of paralysis, muscle weakness, and loss of sensation. Berger states that "the type of paralysis may vary in nature, and in degree, the specific disability depending upon the site and extent of the pathology in the nervous system."(2)

Injuries to the spinal cord may be severe enough to sever completely or badly bruise the cord. If there is only partial severing, some of the nerve fibers may regenerate and there may be some return of function. In

the complete severance of the cord, regeneration is not likely to occur. As yet there are no techniques that have been developed that will regenerate the spinal cord. Windle⁽⁴⁸⁾ reports that research has been carried on at the University of Pennsylvania and University of Indiana regarding the problem of regeneration in the spinal cord and the use of the bacterial product "Pyromen" on experimental animals. It is thought that dense scar tissue occurring in the site of injury or disease inhibits growth of nerve fibers in the area. Other research is being carried on under the sponsorship of the Paralyzed Veterans Association and a fellowship program under the National Paraplegia Foundation.⁽⁶⁾

If there is partial or total paralysis as the result of an accident, much can be done at the scene of the accident to prevent further injury to the cord. Immediately following partial or total transection of the spinal cord, a period called spinal shock by Munro⁽³²⁾ and surgical shock by Freeman,⁽¹¹⁾ occurs. During this period there is atonicity of the bladder and bowel and loss of skin-vascular reflexes. The problems presented are physical, psychological, and social in nature.

Menninger⁽²⁶⁾ refers to the perception of the disabled individual of his own physical structure as "body image." The integration of the physical disability into the

individual's concept of his body images takes considerable time. The paraplegic patient may react demonstrating his inability to comprehend the meaning of his disability. An evaluation of the emotional forces at work within the individual and in the environment must be done. Grayson feels that "the personality structure of the individual plays an important role in rehabilitation and in the acceptance of the disability."⁽¹⁴⁾ Bodily functions such as control of bladder and bowel and sexual function assume great proportions psychologically. During childhood, the individual may have had unpleasant experiences concerning toilet training; these experiences have a lasting influence on the individual. Failure to comply to what was expected of the child may have been met by verbal threats and punishments inflicted by his parents. Feelings of shame and guilt are felt by the paraplegic individual because of his inability to regulate the excretory functions.

If the man of the house becomes a paraplegic, there may be a reversal of role for the male. The disabled male may need to carry on the activities and work in the home while his wife goes outside of the home to work and support the family. The female paraplegic who is a housewife will probably need assistance with household tasks that she had been able to do prior to her illness or accident. Feelings

of inadequacy and overdependency may arise because of her inability to carry on as a housewife. At the Institute of Physical Medicine and Rehabilitation, New York University, handicapped homemakers are helped in the planning of work schedules and in the arrangement of their kitchens to save time and energy. (19)

Functions of Members of the Health Team

The "health team" consists of doctors, nurses, occupational therapist, physical therapist, social worker, clinical psychologist, vocational counselor, and others. The physician supervises the over-all care of the patient from the time of admission, conducts the neurological examination, and diagnoses the location, nature, and extent of the lesion. If surgery is indicated, a surgeon joins the team. The orthopedist, according to Larson and Gould(24) is usually the captain of the rehabilitation team. He deals with problems of associated injuries occurring at the time of the accident, applies necessary traction for relief of spinal cord compression, supervises the ambulation of the patient, orders physical and occupational therapy, and orders braces for the paraplegic patient. The urologist is often consulted soon after a paraplegic patient is admitted; he plays an important role in the urological problems and bladder training

program of the paraplegic patient. The physiatrist, a doctor who specializes in physical medicine, may supervise the activities and exercises of the patient as the paraplegic patient comes to the Physical Medicine Department.

If the hospital has a physical therapy department, the physical therapist will come to the bedside of the patient and institute simple exercises for the bedridden. The therapist exercises the involved joints and re-educates the weakened muscles. The physical therapist may then carry out a concentrated program of resistive and ambulation exercises and assist the patient in crutch walking. The occupational therapist will continue with the resistive exercises of the upper extremities in the form of activities. The objectives of the occupational therapy are to improve the physical function, to measure work dosage and progress, to improve mental status, and to aid in the vocational exploration.⁽³⁾ Some of the activities in occupational therapy lend themselves in prevocational exploration such as woodworking, leatherwork, weaving, and the like. The therapist may help the paraplegic patient in doing the activities of daily living and making self-help devices or gadgets with which to assist himself. The social worker is able to contribute to the rehabilitation of the paraplegic patient

by obtaining information about the patient and his family and passing this information on to other members of the "health team." Being familiar with the social agencies in the community, the social worker is able to help the patient make arrangements for payment of medical services or may be able to refer the patient for financial assistance, convalescent care, and transportation to the community rehabilitation center. The psychologist on the "health team" assesses emotional problems that the paraplegic patient may have and endeavors to find out from the patient what he expects from rehabilitation. Psychological testing may be administered by the psychologist to determine the paraplegic patient's potentialities, his intelligence, and interests.

A vocational counselor can assist the paraplegic patient by making him aware of his abilities despite his disability. The counselor is able to evaluate the paraplegic patient through counseling and administering special vocational aptitude tests. The vocational counselor can assist the paraplegic patient in setting realistic vocational goals. Before the patient is discharged from the hospital, the vocational counselor can make various contacts in the community for possible job placement for the paraplegic patient. (47)

The Nurse's Role in the Rehabilitation
of Paraplegic Patients

The nurse may contribute a great deal in the physical, social, psychological, spiritual, and vocational rehabilitation of the paraplegic patients. Paraplegic patients may be admitted to hospitals where there are no rehabilitation services available. Patients with spinal cord involvement are major nursing problems according to Larson. (24)

The nurse will need to make a nursing care plan for the paraplegic patient taking into consideration the physical needs of good skin care, change of position, prevention of deformity, and maintenance of normal joint motion. Morrissey stresses the importance of instituting early the measures of correct body mechanics, proper positioning in bed, early ambulation, and corrective exercises to reduce the incidence of deformity. (29) The nurse takes the patient's affected extremities through a range of normal joint motion at least twice a day. This is ordered by the physician; in larger hospitals this may be carried out by the physical therapy department. However, in many hospitals it is the nurse that carries out such exercises.

Larson and Gould point out that "nurses caring for paraplegic patients must constantly consider the following facts: 1. urinary sepsis is the primary cause of death

after paraplegia, 2. atrophic ulcers and bedsores are the second most common cause of death in this condition." (24) The nurse must do everything possible to eliminate chances of infection by careful preparation of materials used in bladder management.

Much of the care of the paraplegic patient is implicit in good nursing care which includes attention to such factors as hygiene, nutrition, exercise, elimination, rest, recreation, diversion, and occupation according to Morrissey. (28,29) In addition rehabilitative techniques must be practiced by the nurse. These include

methods of preventing physical deformity, teaching ambulatory techniques as brace and crutch walking, preventing and caring for decubitus ulcers, teaching self-care activities, controlling incontinency by the rehabilitation of bladder and bowel. . . . (29)

Hartigan states that some of the factors implicit in nursing care most often overlooked are as follows:

1. understanding our patients, 2. recognizing that within simple nursing procedures there is much that can be done which will set the patient well along the road to full rehabilitation, 3. teaching the patient, his family, and others, and 4. working with other services to provide the best possible assistance for meeting the patient's total needs. (16)

Phillips (35) and Morrissey (29,30) indicate the nurse can contribute to the rehabilitation of patients and is an important member of the "health team." The nurse's relationship to the patient makes the nurse invaluable in

the teaching of activities of daily living and motivating the disabled patient. Rusk states, "Retraining in the basic activities of daily living is primary; . . . for daily-activity skills are the basis for all subsequent activities."(37)

At one time "good nursing" was thought to be the kind that the nurse did everything for the patient and to the patient. Today "good nursing" is something quite different. It is aimed toward helping the patient to do as much for himself as possible; it is encouraging the patient to do as much as he can; and it is teaching him how to do the activities of daily living. Teaching the paraplegic patient to live and work with what abilities he has left will relieve the patient's family of some of the burden of care for the patient physically, socially, and economically. Teaching and encouraging the patient to do for himself will prepare him for the "transition from relatively dependent hospital existence to almost complete independence upon discharge."(23) Priest points out that effective teaching is dependent upon the simple presentation of knowledge adapted to the particular needs of the patient. It is important for the nurse to understand the patient's intellectual level, emotional stability, educational background, race, religion, social customs, and the environment of his family. All teaching must be

patient and family-centered.(36)

The nurse will be in contact with the paraplegic patient for a long period of time and thus has an opportunity to know the paraplegic patient as a person. The nurse must endeavor to help the patient to express his feelings about his illness, to express his likes, dislikes and opinions.(20) It will be of help in understanding the patient's disability, if the nurse learns of the patient's plans and hopes prior to his illness. The nurse must also be aware of the effect of the patient's illness on the family and community. The nurse may well influence the family and community's attitude toward the paraplegic patient. The nurse can help the patient in early adjustment to his disability. The nurse can also be of assistance by motivating and encouraging the patient. Morrissey states the "nurse must assist the psychiatrist and psychologist by correctly applying principles of psychotherapy in all her contacts with the handicapped person."(29)

As pointed out by Terry, the nurse can be of help to other members of the "health team" by discussing with them the patient's attitudes toward the rehabilitation program.(45) The nurse needs to learn to work with others toward the common aim or objective for the paraplegic patient. The nurse needs to understand the functions of

other members of the "health team," and may promote better relations within the team.

The nurse may act as coordinator of services to the paraplegic patient. The nurse may encourage the patient to carry out correctly the instructions given to him by other members of the "health team."

In formulating and carrying out plans for the rehabilitation of the paraplegic patient, the "health team" should meet together in group conferences. The nurse may interpret to the patient and to the family the rehabilitation program. In addition the nurse may interpret the patient's needs and attitudes, and the attitude of the family to the "health team" members.

Related Studies

Very few studies have been written relative to the problem of this study. A study was reported in the February, 1957 Nursing Research which the writer was unable to obtain: Study of the Emotional Problems Expressed by the Paraplegic Patient, a master's thesis by Chloe K. Trammell accepted in August, 1956 by the University of Colorado. The summary of findings as found in the Nursing Research were as follows:

Paraplegic patients can identify problems to interviewer; problems group into autistic thinking, anxiety, conflict, home problems,

self reproach, lack of care, self concern, dependence versus independence, needs; this group of patients showed refusal to plan within limitation of disability; problems causing common concern--future security threatened, marital concern, sexual and physical inadequacy, feelings of rejection, dependence versus independence, all patients felt nurses too busy to help them. (46)

CHAPTER III
METHOD OF PROCEDURE

The purpose of this study was two-fold.

1. From the opinions of a selected group of individuals associated in various phases of rehabilitation of paraplegic patients, the following information was obtained:

- a. What concepts of rehabilitation are in evidence?
- b. At what phase of illness does the rehabilitation process begin?
- c. What members of the medical and allied professions should compose the "health team" in the rehabilitation of paraplegic patients?
- d. What is the role of the nurse in the rehabilitation of paraplegic patients?

2. To determine the agreement, if any, between the information obtained and the current concepts of rehabilitation and the role of the nurse in the rehabilitation process as reported in the literature.

An interview guide was developed for use in interviewing a selected group of individuals associated in

various phases of rehabilitation of paraplegic patients.² A trial interview was carried out and subsequent revisions were made in the interview guide. The guide was concerned with obtaining data in the following areas: Information relative to the interviewee's function in the rehabilitation of paraplegic patients; the interviewee's opinions concerning the nature of the role of the nurse in rehabilitation of paraplegic patients; the services offered by the hospital or agency in which the individual worked; and finally the agencies used in referral of paraplegic patients by the interviewee and/or his agency.

The selection of the participants was made in view of past or present experience in the rehabilitation of paraplegic patients. Sixty-nine individuals were representatives of the seven disciplines commonly considered to be constituents of the "health team." Of the remaining persons to be interviewed, eight were handicapped persons and one was an individual who secured the necessary equipment and prosthetic devices used by paraplegic patients.

Telephone contact was made with each individual selected requesting an appointment for an interview. The purpose was clarified at the time of the interview. Few

²Interview guide is included as Appendix A, p. 92.

interruptions occurred at the time of the interview which permitted continuity of thought in regard to questions asked. The interview guide was completed by the interviewer. The interviewee was given a copy of the guide as a reference.

The interview method was selected in preference to the questionnaire method as it was deemed to be the method of choice in obtaining an immediate and truthful response. The possibility of a bias being introduced in the interview situation was taken into consideration. Therefore, an attempt was made to avoid any indication of the interviewer's concepts of rehabilitation and role of the nurse in the rehabilitation of the paraplegic patient. In one instance the interviewer's concept of rehabilitation was requested. The interviewer directed the question back to the interviewee who then gave her own concept of rehabilitation.

The information from the interviewees was summarized in the following manner according to discipline:

1. The past experiences and functions of the interviewees in the rehabilitation of paraplegic patients.
2. The problems encountered by the interviewees with paraplegic patients and the possible causes of these problems.
3. The services rendered by the agency in which the

interviewees currently work.

4. The role of the nurse in the rehabilitation of paraplegic patients.

5. The agencies used in the referral of paraplegic patients by the interviewee or by the agency in which he works.

The responses of the handicapped persons were summarized separately.

In order to interpret the significance of information gained through interview, it was deemed advisable to utilize a questionnaire to determine the interviewee's concepts of rehabilitation and "health team" and perceptions of the term "role," "nursing," and "nurse."^a The questionnaire was revised following a trial in which it was administered to six persons, three head nurses, one public health nurse, one nurse educator, and one doctor. The suggestions made by these persons were then incorporated into the questionnaire before submitting it to the respondents.

A limitation presented by the check-list questionnaire is mentioned by Good, Barr, and Scates.⁽¹³⁾ The check-list type of questionnaire may make the respondent feel that the items listed are the only possible answers and therefore,

^aQuestionnaire is included in Appendix B, p. 95.

no further attempt is made to give his own opinion. There was an attempt to avoid this by making it possible for the respondent to add his own opinions in addition to checking the items.

The responses to the check-list questionnaire were placed on a master tabulation as follows:^a

1. The responses to the term "role."
2. Responses to the term "nurse" and definition of "nursing."
3. Responses to the definitions of "rehabilitation" and the period when rehabilitation should be initiated.
4. Responses as to who of the members of the medical and allied professions should compose the "health team."

The findings of the interviews were compared to the findings of the questionnaire. The information obtained from the interview and questionnaire was then compared with the current concepts of rehabilitation and the role of the nurse in the rehabilitation of the paraplegic patient as reported in the literature. From the tabulations and summarizations, the data were analyzed and interpretations were made. From the interpretations of the data, conclusions were drawn.

^aMaster tabulations are included as Appendix C, p. 99.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

This study was undertaken to determine the opinions of representative members of a "health team" relative to the role of the nurse in the rehabilitation of paraplegic patients. Data were obtained through interview and questionnaire methods. Of the participants selected 78 individuals were interviewed and later received follow-up questionnaires. Of the 78 persons interviewed, 70 (90 per cent) returned questionnaires. Consequently, data obtained from 8 interviews were discarded.

Table I illustrates the number of participants. The respondents were categorized according to professional or vocational disciplines associated with rehabilitation of paraplegic patients and according to handicap.

TABLE I
DISTRIBUTION OF PARTICIPANTS ACCORDING TO
PROFESSIONAL OR VOCATIONAL DISCIPLINES ASSOCIATED
IN THE REHABILITATION OF PARAPLEGIC PATIENTS OR HANDICAP

Participants	Number of Participants	
Registered Nurses		
Public health nurse	9	
Instructor	6	
Head nurse	5	
Supervisor	2	
Private duty nurse	2	
Total		24
Allied Medical Professions		
Physical therapist	9	
Social worker	6	
Occupational therapist	6	
Clinical psychologist	2	
Total		23
Doctors		
Orthopedist	3	
Neurosurgeon	3	
Urologist	3	
Physiatrist	1	
Total		10
Vocational Personnel		
Vocational counselor	2	
Personnel manager	1	
Placement supervisor	1	
Educational therapist	1	
Prosthetic chief	1	
Total		6
Handicapped Persons	7	
Total		7
Total	70	

Respondents' Experience
With Paraplegic Patients

Information was elicited from each interviewee concerning the nature of activities in which the participant had had experience in the care of paraplegic patients. The nurses reported experience in ministering to the patient's physical needs, teaching the activities of daily living, and other phases of health care. Head nurses, supervisors, and instructors designated that their experiences were extended to include the supervision and teaching of student nurses and other nursing personnel involved in the care of the paraplegic patient. One of the private duty nurses specialized in the care of paraplegic and quadriplegic male patients.

The doctors reported experiences consistent with their fields of specialization. The psychologist, counselors, therapists, and other participants likewise functioned according to the scope of their preparation.

Problems Encountered by the Respondents

Information was also obtained concerning problems which the participants noted in relation to the paraplegic patient. Some of these problems had to do with factors that interfered with physical well-being, such as decubiti, incontinence, infection, skin disorders, and the like.

A large range of psychological and emotional problems was mentioned including the patient's feeling of worthlessness, depression, inability to accept disability, dependency, despondency, and similar factors. There were numerous comments concerning patient-family relationships, particularly those that involved marital disharmony, inability on the part of the family to accept the patient's disability, over solicitation, and lack of understanding of the aims of the plans for rehabilitation. Economic and social problems were mentioned consistently.

Factors which the participants indicated might be responsible for the problems or at least contribute to the complexity of the patient's situation were closely linked to the problems themselves. Comments which some participants made in designating the problem were identical or similar to those made by other participants in identifying the cause of the problems. To illustrate, many participants referred to the patient's inability to accept his disability as a problem. Other respondents described the patient's inability to accept his disability as being a prime factor in creating his problems, particularly those that resulted in dependency, lack of realistic goals for the future, and apathy. The details of this part of the study have been included in the Master Tabulation (Appendix C).

Services Offered by the Agency
In Which Participants Were Employed

Each respondent indicated the services offered by his or her employing agency that would relate to the care and rehabilitation of paraplegic patients. Obviously, the services mentioned were those which coincide with each participant's field of endeavor. In order for the entire category of services to be made available to any one patient, it would be necessary for the entire rehabilitation team to be at hand.

The Role of the Nurse in the
Rehabilitation of Paraplegic Patients

The responses of interviewees in relation to the role of the nurse in the rehabilitation of paraplegic patients have been classified as follows: Physical aspects of care; psychological, emotional, and spiritual aspects of care; social, and vocational aspects of rehabilitation.

The physical aspects of care were classified in three areas: Prevention of complications, provision for basic physical needs, and provision for health teaching and teaching of activities of daily living. Twenty-seven (43 per cent) of the responses indicated that the nurse had a role in the prevention of complications. Thirty-nine (62 per cent) of the interviewees expressed opinions that

the nurse's role in the rehabilitation was to provide for basic physical needs of paraplegic patients. Forty-five (71 per cent) of the interviewees expressed the opinion that the provision for teaching activities of daily living and health teaching were integral aspects of the role of the nurse in rehabilitation. Tabulation included in Appendix C.

In the psychological, emotional, and spiritual areas, 38 (60 per cent) of the responses expressed in interviews indicated the nurse's role included giving psychological support to paraplegic patients. Thirty-five (56 per cent) of the interviewees expressed the opinion that the nurse's role was to encourage the paraplegic patient to become independent. Twenty-eight (44 per cent) of the interviewees expressed the opinion that the nurse's role included listening to the patient and attempting to gain rapport with the patient. Twenty-five (40 per cent) of the interviewees said that the nurse's role was in assisting the patient in adjusting to his disability. See Appendix C.

In the social aspects of rehabilitation, 14 (22 per cent) of the interviewees expressed the opinions that nurses could help patients participate in family and community life. Eleven (17 per cent) of the interviewees indicated that the nurse's role included teaching the

family how to care for the paraplegic person. Nine (13 per cent) of the persons interviewed said that the nurse's role included initiating referrals or referring paraplegic patients to social agencies. Six (10 per cent) of the responses to the interview said that the nurse's role included informing the patient of available community agencies for rehabilitation and recreation. Tabulation included in Appendix C.

In the vocational area, 14 (22 per cent) of the interviewees made free responses concerning the nurse's role in the rehabilitation of paraplegic patients. These responses included referral by the nurse to the vocational rehabilitation agencies, an awareness of the employment problem encountered by paraplegic patients, and helping patients to develop realistic vocational goals. See Master Tabulation in Appendix C.

Respondents' Comments Relative
to Team Concept in Rehabilitation

Information obtained during the course of the interview relative to the participants' ideas concerning the team concept were widely varied. It would appear that each was reporting within the frame of reference of a specific experience or employment agency. It was not possible to distinguish between what the respondents

believed to be team work and what they expressed as factors which deterred what they believed to be an effective team approach to rehabilitation. There was lack of agreement as to which discipline should head or coordinate the team. One public health nurse commented that the nurse coordinates activities of the various personnel working with the patient. One vocational counselor indicated that he represented the discipline that should head the team.

The interviewees reported factors that they believed deterred from effective teamwork. These factors included lack of communication, lack of facilities outside of Portland, lack of planning by the team, insufficient teamwork among the members of various disciplines, and lack of knowledge of rehabilitation nursing by nurses. Several participants commented that paraplegic patients spend limited periods of time in the hospital. Rehabilitation activities are curtailed due to this factor as well as to the lack of skilled personnel. Several therapists commented that the nurse lacks awareness of what occupational and physical therapy are doing. Several of the participants expressed that there was a lack of rehabilitative services in their hospitals such as diversional and occupational therapy and vocational exploration. Two participants expressed the opinion that the nurse lacked awareness of the concept of rehabilitation

in their hospital situation.

Agencies Used in the
Referral of Paraplegic Patients

It was determined by interview that various types of agencies were utilized in the rehabilitation of paraplegic patients. Mention was made most frequently of vocational rehabilitation services and rehabilitation services preparatory to vocational rehabilitation. The types of agencies less frequently mentioned were special services such as health, nursing, and social services; social and recreational clubs; educational services; and employment agencies. The summary of agencies utilized are included in the Master Tabulations in Appendix C.

Summaries of Critical Items on
Questionnaire Returned by 63 Participants

Responses of 63 participants associated with rehabilitation of paraplegic patients were tabulated and summarized separately. The responses of the handicapped persons to the questionnaire were summarized separately.

Respondents' Understanding of the
Terms "Role," "Nursing," and "Nurse"

The first item of the questionnaire was designed to elicit information as to the participants' perception of the term "role." Fifty-five (87 per cent) of the respondents agreed with the definition of the term "role" as stated, "the complex behavior that is expected of one who occupies a given position."⁽⁴²⁾ Three (5 per cent) of the respondents disagreed with the above definition, and five (8 per cent) indicated no opinion.

Questionnaire item number two was designed to determine the participants' perception of the term "nursing." Fifty-nine (94 per cent) of the respondents indicated that they agreed with the definition of "nursing" as follows:

Nursing in its broadest sense may be defined as an art and a science which involves the whole patient--body, mind and spirit; promotes his spiritual, mental and physical health by teaching and by example; stresses health education and health preservation, as well as ministrations to the sick; involves the care of patient's environment--social and spiritual as well as physical and gives health services to the family and community as well as to the individual.⁽³³⁾

Two (3 per cent) of the respondents disagreed with the statement and two (3 per cent) of the respondents indicated no opinion. See Appendix C.

Questionnaire item number three provided for the expression of opinion concerning the term "nurse." Thirty-eight (60 per cent) of the respondents indicated that to them the term "nurse" meant a registered professional nurse. Twenty (32 per cent) of the respondents did not accept the term "nurse" as meaning a registered professional nurse, and five (8 per cent) indicated no opinion. See Master Tabulation in Appendix C.

To identify further the interpretation of the term "nurse," a check-list of nursing positions was presented. More than one position could be selected. Fifty-six (89 per cent) of the respondents indicated the general duty nurse. Fifty-five (87 per cent) of the respondents selected the head nurse. Fifty-three (84 per cent) of the respondents indicated that the public health nurse, private duty, and supervisory nurse agreed with the term "nurse." Fifty-two (83 per cent) of the respondents indicated that the term "nurse" meant an industrial nurse, and fifty (79 per cent) of the respondents indicated that the term "nurse" meant a nursing instructor. Eighteen (29 per cent) of the respondents indicated the licensed practical nurse and fourteen (22 per cent) respondents indicated the nursing aide or attendant were included in the interpretation of the term "nurse." Tabulation is included in Appendix C.

There appears to be a discrepancy between the number of respondents who indicated that the term "nurse" did not mean a registered professional nurse as compared to the number of respondents that indicated the licensed practical nurse and nursing aide or attendant were included in their interpretation of the term "nurse." Four of the respondents, disagreeing with the term "nurse," checked only the registered professional nurses in the fourth item of the questionnaire. Two of the respondents checked all but the nursing aide or attendant as their interpretation of the term "nurse." Two of the respondents checked the other category indicating anyone giving care to the patient was their interpretation of the term "nurse."

Respondents' Concept of Term "Rehabilitation"

The fifth item of the questionnaire was designed to obtain information relative to the respondents' concept of the term "rehabilitation." The directions given to the respondent were to check the corresponding box to indicate their interpretation of the term "rehabilitation." See questionnaire in Appendix B.

Fifty-eight (92 per cent) of the respondents agreed with the definition of rehabilitation as defined by the National Council on Rehabilitation as "the restoration of the handicapped person to the fullest physical,

psychological, social, vocational, and economic usefulness of which he is capable."⁽⁴⁾ One (2 per cent) of the respondents indicated rehabilitation as the restoration of the handicapped to gainful employment with emphasis on vocational counseling, guidance, training, and placement. Three (4 per cent) of respondents selected the definition of rehabilitation as defined by the National Council on Rehabilitation and also selected the definition as the restoration of the handicapped to gainful employment with emphasis on vocational counseling, guidance, training and placement. One (2 per cent) of the respondents indicated rehabilitation was neither of the definitions stated. See Master Tabulation in Appendix C.

Respondents' Concept of When
Rehabilitation Should Be Initiated

Questionnaire item number six provided for selection by the respondents the period of illness in which rehabilitation should be initiated. Directions given were to place a check mark in the corresponding box. See questionnaire in Appendix B.

Forty-nine (77 per cent) of the respondents selected the onset of the disability as the period of illness in which rehabilitation should begin. Eight (12 per cent) of the respondents indicated that rehabilitation should begin

during the convalescent period. Six (9 per cent) of the respondents accepted neither of the above categories, but indicated that rehabilitation should begin when the patient's condition warranted it. One (2 per cent) of the respondents indicated that rehabilitation should begin during the convalescent period and during the convalescent period after discharge from the hospital. This individual may have misunderstood the directions in answering the question. Tabulation of this questionnaire item may be found in Appendix C.

Table II illustrates the distribution of responses to items five and six of the questionnaire. In comparing the responses to item five with the responses to item six, the majority of the respondents accepted the definition of rehabilitation by the National Council on Rehabilitation, whereas there is more diversity of opinion as to when rehabilitation should begin. This may have some bearing on what they expressed to be the role of the nurse in the rehabilitation of paraplegic patients and team concept in rehabilitation.

TABLE II
 OPINIONS OF 63^a SELECTED RESPONDENTS
 CONCERNING THE PERIOD IN WHICH REHABILITATION SHOULD
 BE INITIATED AND CONCEPT OF THE TERM "REHABILITATION"

Respondents	Number in Group	Rehabilitation Should Be Initiated ^b					Concept of Term Rehabilitation ^c			
		A	B	C	D	E	X	Y	Z	XY
Registered Nurses										
Public health nurse	9	7	1	-	1	-	-	8	1	-
Instructor	6	6	-	-	-	-	-	6	-	-
Head nurse	5	2	2	-	-	1	-	5	-	-
Supervisor	2	2	-	-	-	-	-	2	-	-
Private duty	2	1	-	-	1	-	-	1	-	1
Allied Medical Professions										
Physical therapist	9	7	1	-	1	-	-	9	-	-
Social worker	6	5	-	-	1	-	-	5	-	1
Occupational therapist	6	5	-	-	1	-	-	6	-	-
Clinical psychologist	2	2	-	-	-	-	-	2	-	-
Doctors										
Orthopedist	3	3	-	-	-	-	-	3	-	-
Neurosurgeon	3	2	1	-	-	-	-	3	-	-
Urologist	3	2	1	-	-	-	-	2	-	1
Physiatrist	1	1	-	-	-	-	-	1	-	-
Vocational Personnel										
Vocational counselor	2	2	-	-	-	-	-	1	1	-
Personnel manager	1	1	-	-	-	-	-	1	-	-
Placement supervisor	1	-	-	-	1	-	-	1	-	-
Educational therapist	1	1	-	-	-	-	-	1	-	-
Prosthetic chief	1	-	1	-	-	-	-	1	-	-
Totals	63	49	7	0	6	1		158	1	3

Legend for Table II

^aHandicapped persons not included.

^bRehabilitation should begin: A--At the onset of the disability; B--During the convalescent period; C--During the convalescent period after discharge from the hospital; D--None of the above; E--Checked B and C.

^cConcept of term "rehabilitation": X--The restoration of the handicapped to gainful employment with emphasis on vocational counseling, guidance, training, and placement. Y--The restoration of the handicapped person to the fullest physical, psychological, social, vocational and economic usefulness of which he is capable. Z--Neither of the above. XY--Checked X and Y.

Responses on the
Composition of the "Health Team"

In item seven of the questionnaire, respondents were requested to designate representatives whom they considered should be included as members of the "health team." Included in the category of other were the patient's family and anyone else who gave care to the paraplegic patient or was in contact with the paraplegic patient. Table III illustrates the component members of the "health team" in rank order of responses.

TABLE III
 OPINIONS OF 63^a SELECTED
 RESPONDENTS AS TO COMPONENT MEMBERS OF
 THE "HEALTH TEAM" IN RANK ORDER OF RESPONSES

Responses According to Rank Order	Number of Responses	Percentage
Doctors and/or clinical specialists	60	95
Registered professional nurse	60	95
Physical therapist	58	92
Occupational therapist	58	92
Social worker	57	90
Vocational counselor	56	89
Clinical psychologist	49	78
Spiritual adviser	46	73
Student nurse	45	71
Dietitian	41	65
Recreational therapist	40	62
Nursing aide or attendant	35	56
Licensed practical nurse	32	51
Others	22	35

^aHandicapped persons not included.

Responses of
Handicapped Persons to Interview

Seven persons handicapped by paraplegia due to accident or disease were interviewed. In each interview an attempt was made to find out something about the individual as a person, what each one believed to be the greatest problems of the paraplegic and what each thought was the role of the nurse in caring for paraplegic patients.

Mr. "A" stated that he was depressed the first few months after the accident. He now is able to manage an insurance agency. The problems cited by Mr. "A" were in the accomplishment of activities of daily living due to a high cord lesion, bladder infections, and bowel control. He commented that nurses lack time to give adequate attention to a paraplegic patient. However, nurses could help by encouraging the patient and by teaching him methods of self care.

Mrs. "B" is an active housewife, mother of twins and a club officer. She commented that there was increasing religious interest in paraplegic persons. One problem cited by Mrs. "B" is the public attitude toward disabled persons which at times seems to lower the status of the patient and his family within the community. She

indicated that some improvement in the situation has been demonstrated. Mrs. "B" described the role of the nurse in the care of the paraplegic patients as including the following: Becoming aware of and understanding patients' problems, assisting patients in becoming independent and self-reliant and in aiding families in understanding how they may give support to paraplegic patients.

Mr. "C" is an active person who takes part in civic organizations, carries on a business, and is able to drive a car, hunt, and fish. The problems cited by Mr. "C" were incontinence, pressure sores, over protection by family, and the paraplegic person's lack of cooperation in helping himself. The sources of these difficulties were said to be the nature of the disability and acceptance of the disability by the handicapped person. Mr. "C" stated that the nurse's role in the rehabilitation of paraplegic patients includes referral of patients to the Division of Vocational Rehabilitation and to social groups, preventing pressure sores, teaching bladder control and activities of daily living, as well as assisting the patient in meeting mental and physical needs. The services offered by the club to which Mr. "C" belongs are social activities. The agencies recommended by Mr. "C" in referring paraplegic persons were the Portland Rehabilitation Center, Division of Vocational Rehabilitation, Federation for the Physically Handicapped,

and Double-O Shop.

Mrs. "D", a paraplegic person, is married to a paraplegic person. Mrs. "D" is able to carry on part-time work and help other handicapped persons with work. She stated that the shock of the sudden disability had been a great problem to her and that it took five years to accept her disability. Other problems were pressure sores, bladder and bowel control, and feeling sorry for herself. Mrs. "D" commented that the contributing factor causing the above was the patient's difficulty in adjusting to his disability. Mrs. "D" developed drop foot and commented that had her feet been given proper care she would have been able to wear braces. She stated that the nurse's role includes listening to the patient when he needs to talk, changing the patient's position when he is unable to do so, and assisting the patient getting in and out of the wheelchair or bed.

Mr. "E" encourages others to participate in social activities and is an active member of a club for handicapped persons. Mr. "E" is able to drive a car and able to work repairing sports equipment in a sport goods store. Prior to this time he had been on aid to the permanently disabled. The problems that Mr. "E" cited were pressure sores, bowel and bladder control, and mental depression. He commented that the contributing factors in

these problems were the patient's difficulty in adjusting to his disability and in preparing a new way of life for himself. Mr. "E" stated that the nurse's role was stressing the importance of maintaining fluid intake, helping the patient overcome his depression and assisting the patient in gaining self-confidence by which he may overcome his fear of falling or fear of meeting people. The agencies recommended by Mr. "E" for referral of paraplegic persons were the Portland Rehabilitation Center and Indoor Sports Club. The Indoor Sports Club enables handicapped persons to overcome self-consciousness through meeting people and working with able-bodied persons.

Mr. "F" is a member of the Paraplegic Veterans Association and a local group for handicapped persons. He is able to drive his car with the aid of a hoist for getting into the car since he has no ramp to the driveway. Mr. "F" stated that the problems of the paraplegic person are physical and psychological including over protection of family and dependency on others. He described the nurse's role to be that of teaching the patient activities of daily living. Mr. "F" had had experience on Stryker and Foster Frames. He expressed the opinion that the care required during his experience on a frame contributed to problems of dependency. The agency recommended by Mr. "F" for referral of paraplegic persons was the Portland

Rehabilitation Center.

Mr. "G" is a business man and a very active member of the Governor's Committee on Hiring the Handicapped. Mr. "G" indicated that he had been able to help others by encouraging them and by having a cheerful attitude. He cited the following as being problems to the paraplegic person: Feelings of not belonging in the community, depression and disorganization of personality; physical complications included decubiti, and bladder infections; and social factors such as being financially dependent upon others and the need for reorganization of the patient's way of life. (See Appendix C.)

Responses of Handicapped
Persons to Questionnaire

The questionnaire was submitted to seven handicapped persons. In response to item number one on the term "role," five of the handicapped persons indicated that their opinion was that the term "role" meant "the complex behavior that is expected of one who occupies a given position."⁽⁴²⁾ One of the handicapped persons indicated that it was not his opinion and one handicapped persons indicated no opinion.

The second item of the questionnaire was in relation to the definition of "nursing." The seven handicapped

persons accepted the definition of nursing as follows:

Nursing in its broadest sense may be defined as an art and a science which involves the whole patient--body, mind, and spirit; promotes his spiritual, mental and physical health by teaching and by example; stresses health education and health preservation, as well as ministration to the sick; involves the care of the patient's environment--social and spiritual as well as the physical; and gives health service to the family and community as well as to the individual. (33)

Questionnaire item number three provided for the expression of opinion on the term "nurse." To four of the handicapped persons the term "nurse" meant a registered professional nurse. To three of the handicapped persons the term "nurse" did not mean a registered professional nurse. (Master tabulation in Appendix C.)

The check-list fourth item of the questionnaire was concerned with further identifying the interpretation of the term "nurse." To four of the handicapped persons the term "nurse" meant any of the following: Public health nurse, general duty nurse, industrial nurse, private duty nurse, supervisory nurse, nursing instructor, head nurse, licensed practical nurse, and nursing aide or attendant. Three of the handicapped persons indicated the term "nurse" to them meant anyone of the positions in nursing except the licensed practical nurse and nursing aide or attendant.

The fifth item of the questionnaire was concerned with the respondent's concept of the term "rehabilitation." The seven handicapped persons agreed with the definition of

rehabilitation as "the restoration of the handicapped person to the fullest physical, psychological, social, vocational, and economic usefulness of which he is capable."⁽⁴⁾ (See Appendix C.)

Questionnaire item number six was concerned with the respondent's opinion as to when rehabilitation should be initiated. Two of the handicapped persons indicated that rehabilitation should begin at the onset of disability; three indicated rehabilitation should begin during the convalescent period, and two indicated rehabilitation should begin during the convalescent period after discharge from the hospital. (See Appendix C.)

The seventh item in the questionnaire was in relation to who should be members of the "health team." Six of the handicapped persons indicated that the doctor, nurse, and physical therapist should be members of the "health team." Five of the handicapped persons indicated that the occupational therapist, vocational counselor, and the spiritual adviser should be members of the "health team." Four of the handicapped persons indicated that the student nurse and clinical psychologist should be members of the "health team." Three of the handicapped persons indicated that the social worker, recreational therapist, and dietitian should also be members. One handicapped person indicated the licensed practical nurse should be a member.

None of the seven handicapped persons indicated that the nursing aide or attendant should be members. One of the handicapped persons stated that anyone of the group could play an important part. One of the handicapped persons commented that it would be helpful if the patient could associate with a paraplegic person who has benefited from rehabilitation. It would serve as an inspiration to the patient. This handicapped person also commented that anyone who cares for the patient directly or indirectly should have training or instructions in his "role" in the rehabilitation of the patient. (See Appendix C.)

Comparison and Interpretation of Data

Obtained from Interviews and Questionnaires

The data obtained from the interviews and questionnaires were compared in summary tables in relation to the purposes of this study. Interpretations were attempted.

1. What concepts at rehabilitation were in evidence from data obtained in this study?

Interview: From the aggregate response of the interviewees there appeared to be minimal evidence that rehabilitation as defined by the National Council on Rehabilitation is being practiced. It would appear that each individual was concerned with his own role in caring for

the paraplegic patient. Common problems were cited by the various categories of participants indicating awareness of patients' needs with regard to physical disability, psychological, social, and vocational problems. In a few instances the interviewees expressed a desire for greater coordination in the rehabilitation program.

Questionnaire: Fifty-eight of the respondents agreed with the definition of rehabilitation as being "the restoration of the handicapped person to the fullest physical, psychological, social, vocational, and economic usefulness of which he is capable."⁽⁴⁾ Five of the respondents held a more limited view of rehabilitation as it is related to vocational training and placement.

Interpretation: Despite the acceptance of the definition of rehabilitation, there appeared to be minimal evidence of rehabilitation in actual practice in its broad concept.

2. What were the participants' opinions regarding the period in which the rehabilitation should be initiated?

Interview: From the information obtained from the interview there seemed to be an indication that the interviewees were concerned with

rehabilitation in the limited sense as it related to their period of association in the rehabilitation program. However, the emphasis in the function of the nurse was largely in the areas of psychological and physical aspects in rehabilitation of paraplegic patients.

Questionnaire: Forty-nine of the respondents indicated that rehabilitation should begin at the onset of the disability. Seven of the respondents indicated that rehabilitation should begin in the convalescent period. One indicated that rehabilitation should begin in the convalescent period and in the convalescent period after discharge from the hospital. Six of the respondents indicated that rehabilitation should begin when the patient's condition warranted it.

Interpretation: There appears to be more indication of agreement that rehabilitation should be initiated at the onset of the disability.

3. What members of the medical and allied professions should compose the "health team" in the rehabilitation of paraplegic patients?

Interview: Forty-eight of the interviewees expressed awareness of services available in the agency in which they worked with regard to the

rehabilitation of paraplegic patients. In two instances, interviewees indicated that there were group conferences held to discuss the needs and problems of paraplegic patients. The majority of interviewees expressed awareness of referral of paraplegic patients to other agencies for rehabilitative services. In several instances, the interviewees expressed the lack of rehabilitative services such as occupational therapy and vocational exploration in the agencies in which they were employed.

Questionnaire: The majority of respondents indicated that the nurse and doctor should be members of the team. Next in rank order of responses were the physical therapist, occupational therapist, social worker, vocational counselor, clinical psychologist, spiritual adviser, student nurse, dietitian, recreational therapist, nursing aide, and licensed practical nurse. See Table II, page 58. Sixteen of the registered nurses indicated the licensed practical nurse was a member of the team. Three of the doctors indicated the licensed practical nurse should be a member of the team. Twelve of the allied medical professions selected the

licensed practical nurse as a member of the "health team." Sixteen of the registered nurses indicated that the nursing aide should be a member of the health team. Six of the doctors selected the nursing aide or attendant as members of the "health team." Thirteen of the participants in the allied medical professions category indicated that the nursing aide or attendant should be a member of the "health team."

Interpretation: It would seem that the participants were aware of other individuals that could contribute to the rehabilitation of paraplegic patients but were not aware of a "health team" functioning as such. It would appear that the majority of participants were of the opinion that the nurse was a member of the "health team." There were more responses in the doctor and allied profession categories indicating that the nursing aide or attendant should be a member of the "health team" than the responses indicating the practical nurse should be a member of the team.

4. What were participants' opinions of the nurse's role in the rehabilitation of paraplegic patients?

Interview: Fifty-nine of the interviewees expressed the opinions that the nurse had a role in the rehabilitation of paraplegic patients. From the aggregate responses of the interviewees the role of the nurse in the rehabilitation of paraplegic patients were categorized in the areas of physical, psychological, emotional, spiritual, social, and vocational aspects. In the free responses to the question, "What is the role of the nurse in the rehabilitation of paraplegic patients?" the majority of interviewees indicated the nurse's functions were largely in areas of psychological and emotional, physical, social, and vocational areas.

Psychological and emotional aspects compared with physical aspects: Of the 24 nurses responding there were 60 responses in the area of psychological and emotional aspects as compared with 42 responses in the area of physical care in the rehabilitation of paraplegic patients. Of the 10 doctors responding there were 13 responses in the psychological area as compared with 26 responses in the physical aspects. Of the 23 participants in the allied medical profession category responding there were 45 responses in

the psychological area as compared to 35 responses in the physical area. Of the 6 participants responding in the vocational category 8 responses were in the psychological area as compared to 4 in the physical area.

Social aspects compared with vocational aspects: Of the 24 nurses responding there were 19 responses in the area of social aspects of rehabilitation as compared to 5 responses in the area of vocational aspects of rehabilitation. Of the 10 doctors responding there were 2 responses in the social area and no response in the vocational area of rehabilitation. Of the 23 responding in the allied medical profession category 16 responses were in the social area of rehabilitation and 6 responses in the vocational area. Of the 6 participants in the vocational category 3 responses were in the social area and 3 responses were in the vocational area. Four of the participants indicated that the nurse has little or no role in the rehabilitation of paraplegic patients.

Questionnaire: The majority of respondents agreed with the definition of "role" as being "the complex behavior that is expected of one who

occupies a given position."⁽⁴²⁾ The majority of the respondents agreed with the definition of "nursing" as follows:

Nursing in its broadest sense may be defined as an art and a science which involves the whole patient--body, mind and spirit; promotes his spiritual, mental and physical health by teaching and by example; stresses health preservation as well as ministrations to the sick; involves the care of the patient's environment--social and spiritual as well as physical and gives health service to the family and community as well as to the individual.⁽³³⁾

Two respondents disagreed with the above definition and two indicated no opinion. Thirty-eight of the respondents agreed that the term "nurse" to them meant a registered professional nurse. Twenty respondents indicated that it was not their opinion and five respondents indicated no opinion.

Interpretation: It would appear that the participants were referring to the term "role" in the same frame of reference. The majority of participants indicated agreement to the definition of "nursing." There was a diversity of opinion among the participants as to the interpretation of the term "nurse." It would be of interest to compare the number of responses of the participants

in the psychological area as compared in the physical area. The registered nurse category indicated by their number of free responses that the role of the nurse in the rehabilitation of paraplegic patients was often in the area of the psychological aspects. The doctor category indicated that the nurse's role in the rehabilitation was more in the physical area than in the psychological area. In the allied medical profession category and in the vocational category there were more responses in the psychological area than physical area. All categories indicated more in the social aspects of rehabilitation than in the vocational. It would seem that the nurse's role with regard to the psychological and physical aspects of rehabilitation of paraplegic patients was foremost in the thinking of the participants. These were free responses categorized into the various aspects of rehabilitation of paraplegic patients. It would appear that the majority of respondents believe that the nurse has a definite role in the rehabilitation of paraplegic patients.

TABLE IV
 COMPARISON OF DATA OBTAINED FROM QUESTIONNAIRE
 AND INTERVIEW OF THE PARTICIPANTS WHO INDICATED THE
 NURSE HAD NO ROLE IN THE REHABILITATION OF PARAPLEGIC PATIENTS

Respondents	Number	Rehabilitation Should Begin ^a	Definition of Rehabilitation ^b	Definition of "Health Team" ^c	Definition of Role ^d
Registered nurses					
Public health nurse	1	at onset	agree	agree	agree
Head nurse	1	at onset	agree	agree	agree
Head nurse	1	during convalescent period	agree	agree	agree
Doctor					
Neurosurgeon	1	during convalescent period	agree	agree	agree

Legend for Table IV

^aRehabilitation should begin:

A--At the onset of disability. B--During the convalescent period. C--During the convalescent period after discharge from the hospital. D--None of the above.

^bRehabilitation as defined by the National Council on Rehabilitation: "the restoration of the handicapped person to the fullest physical, psychological, social, vocational and economic usefulness of which he is capable."(4)

^c"Nursing in its broadest sense is an art and a science which involves the whole patient--body, mind and spirit; promotes his spiritual, mental and physical preservation, as well as ministrations to the sick; involves the care of the patient's environment--social and spiritual as well as physical; and gives health service to the family and community as well as to the individual."(33)

^dRole is "the complex behavior that is expected of one who occupies a given position."(42)

5. What were the concepts of rehabilitation held by the participants of this study as compared with those reported in the literature?

Information Obtained In Study: The majority of the participants agreed with the definition of rehabilitation as "the restoration of the handicapped person to the fullest physical, psychological, social, vocational, and economic usefulness of which he is capable."⁽⁴⁾ The majority of participants felt that rehabilitation should begin at the onset of disability.

Literature: The definition of rehabilitation has become generally accepted in the United States. The current concept of rehabilitation is a broad one. Rehabilitation is thought to begin at the onset of illness or disability and extend out into the community. Rehabilitation is also thought to be a part of good medical and nursing care and therefore should be available to all. Each person must be considered individually in meeting his rehabilitation needs.

Interpretation: It would appear that there is agreement.

6. What are the opinions of the participants of this study with regard to the role of the nurse in the

rehabilitation process as compared with what is reported in the literature?

Information Obtained In Study: The majority of the respondents felt that the nurse should be a member of the "health team." The majority of respondents felt that the nurse had a role in the rehabilitation of paraplegic patients. A larger proportion of the respondents indicated that the nurse has a role in the physical and psychological aspects of rehabilitation of paraplegic patients. A lesser number responded in the areas of social and vocational aspects. 45 responses were in the area of health teaching and teaching activities of daily living.

Literature: Rusk, Morrissey, Phillips, Knocke, and other writers who are authorities in rehabilitation feel the nurse is a member of the rehabilitation team. It is reported in the literature that the nurse's contribution in the rehabilitation of paraplegic patients embraces the areas of physical, psychological, social, and vocational aspects of rehabilitation. Great stress is placed on teaching the activities of daily living.

Interpretation: There appears to be agreement that the nurse should be a member of the rehabilitation team. There appears to be agreement that the nurse has a role in the rehabilitation of paraplegic patients in the physical, psychological, social, and vocational aspects. There appears to be awareness on the part of the participants of the role of the nurse in rehabilitation.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was undertaken to determine opinions of a group of 70 selected individuals associated in various phases of rehabilitation concerning the role of the nurse in the rehabilitation of paraplegic patients.

By interview and follow-up questionnaire information was obtained from the participants concerning their concepts of what is meant by rehabilitation, the phase of illness in which rehabilitation begins, what members of the medical and allied medical professions should compose the "health team" in the rehabilitation of paraplegic patients, and what the role of the nurse is in the rehabilitation of paraplegic patients; and lastly to determine the agreement, if any, between the information obtained and the current concepts of rehabilitation and the role of the nurse in the rehabilitation process as reported in the literature.

The participants were selected because of their past or present experience in the rehabilitation of paraplegic patients. Sixty-nine individuals were representatives of the seven disciplines commonly considered to be constituents of the "health team." Of the remaining participants, eight were handicapped persons and the one

was an individual who secured the necessary equipment and prosthetic devices used by paraplegic patients.

Seventy-eight persons were interviewed, 70 of whom completed and returned the follow-up questionnaire. The interview data of the eight participants not returning questionnaires were discarded. The total number of interviews and questionnaires used in this study was 70.

After the information was obtained, it was summarized, tabulated, and analyzed. The data obtained from the interviews were compared with the data obtained from the questionnaire. The data obtained were then compared with the current concepts of rehabilitation and the role of the nurse in the rehabilitation process as reported in the literature. Interpretations were attempted and conclusions were drawn.

Strengths of this study may be: 1. that an attempt was made to avoid any indication of the interviewer's concept of rehabilitation and the role of the nurse in the rehabilitation of paraplegic patients; 2. that the interview guide allowed for the free responses of the participants. A follow-up questionnaire indicated that the participants had answered the question, "What is the role of the nurse in the rehabilitation of paraplegic patients?" in the same frame of references as revealed by interview.

Weaknesses of this study may be: 1. that the interview guide was not structured to obtain information regarding the role of the nurse in the various phases of rehabilitation; and 2. that the questionnaire was submitted to the participants approximately a year after the interview.

The data obtained may be summarized as follows:

1. The majority of respondents agreed with the definition of rehabilitation as being "the restoration of the handicapped person to the fullest physical, psychological, social, vocational, and economic usefulness of which he is capable." (4)

2. Forty-nine (77 per cent) of the participants indicated that rehabilitation should begin at the onset of disability.

3. The participants, with few exceptions, recognized and accepted the nurse as a member of the "health team."

4. The majority of the participants agreed with the definition of the term "role" as being "the complex behavior that is expected of one who occupies a given position." (42)

5. The majority of the respondents agreed with the definition of "nursing."

6. There was a diversity of opinion among the respondents with regard to the term "nurse" meaning a

registered professional nurse.

7. The majority of the respondents indicated the nurse's functions were largely in the areas of psychological and physical aspects of rehabilitation of paraplegic patients. There were fewer responses in the social and vocational areas.

8. Common problems in relation to paraplegic patients were cited by all participants.

9. A large proportion of respondents expressed awareness of the services available in the agency in which they were working. A lesser number of respondents mentioned only the services in their own area of employment.

10. The majority of the respondents indicated one or more agencies used in the referral of paraplegic patients.

The conclusions are as follows:

1. Although the participants were in general agreement with the accepted definition of rehabilitation and with the concept that rehabilitation should be initiated at the onset of disability, there appeared to be few instances in which rehabilitation was in actual practice.

2. It would appear that the participants were aware of the nurse's contribution in the various phases of rehabilitation of paraplegic patients.

3. It would appear that the participants were of the opinion that the nurse should be a member of the "health team."

4. It would also appear that the opinions of the participants with regard to the nurse's role in the rehabilitation of paraplegic patients were in agreement with that which is reported in the literature.

In view of the findings of this study it is recommended that further studies be conducted to determine:

1. The role of the nurse in the "health team."
2. The opinions of a larger group of nurses and doctors concerning the role of the nurse in the rehabilitation of paraplegic patients.
3. The availability of rehabilitative services in general hospitals in Oregon for the care of paraplegic patients.
4. The role of the practical nurse or nursing aide in the "health team" in the rehabilitation of paraplegic patients.
5. The nature and scope of instruction and experience essential for preparing a nurse to function competently and fully as a member of the "health team" in the rehabilitation of paraplegic patients.

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APPENDIX A
INTERVIEW GUIDE

Name of individual interviewed _____

1. Have you worked with paraplegic patients? _____
In what capacity?
2. What functions and activities have you carried on relative to the rehabilitation of paraplegic patients?
3. What were the problems encountered as you worked with paraplegic patients? Which problems have you encountered most frequently?
4. What do you feel are the causes of these problems that occur more frequently?
5. What do you feel is the nurse's function in each of these problems?
6. What do you feel is the role of the nurse in the rehabilitation of the paraplegic patient?

7. What services does the agency you work with offer to the paraplegic patient?

8. To what agencies do you refer paraplegic patients?
To what agencies are paraplegic patients referred?

APPENDIX B
COVERING LETTER AND QUESTIONNAIRE

2475 N.W. Westover Road
Portland 10, Oregon
March 4, 1958

Dear

You may recall my interviewing you last year at this time. The purpose was to obtain your opinion of what the role of the nurse is in the rehabilitation of paraplegic patients.

Your opinion as obtained has been of great value in the writing of my thesis. May I ask your further help by completing the following questionnaire. It will take but a few minutes of your time. The completion and return of the questionnaire by March 12, 1958 will be greatly appreciated.

Enclosed you will find a self-addressed and stamped envelope for your convenience in returning the questionnaire.

Very truly yours,

(Miss) Virginia Mueller, R.N.

QUESTIONNAIRE

Directions:

In the interview you were asked "what is the role of the nurse in the rehabilitation of the paraplegic?" Please indicate your interpretation of the terms "role," "nursing," "nurse," and "rehabilitation." Also indicate whom you think should be members of the "health team" and when rehabilitation should begin. Place a check (✓) in the corresponding box.

1. Role is the complex behavior that is expected of one who occupies a given position.¹

My Opinion	Not My Opinion	No Opinion
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Nursing in its broadest sense may be defined as an art and a science which involves the whole patient--body, mind, and spirit; promotes his spiritual, mental and physical health by teaching and by example; stresses health education and health preservation, as well as ministrations to the sick; involves the care of the patient's environment--social and spiritual as well as the physical; and gives health service to the family and community as well as to the individual.²

My Opinion	Not My Opinion	No Opinion
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹Saunders, Lyle. "The Changing Role of the Nurse." A.J.N. 54:1094, September 1954.

²Olivia, Sister. Nursing. Catholic University of America. Washington, D.C. Quoted by Ferrodin, Cecilia M. Super-
vision of Nursing Service Personnel. New York: The Macmillan Company, 1954. pp. 598-599.

3. The term nurse means a registered professional nurse.

My Opinion	Not My Opinion	No Opinion
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. You interpret the term nurse to mean the:

- | | | |
|---------------------------------------|----|--------------------------|
| A. Public Health Nurse | A. | <input type="checkbox"/> |
| B. General Duty Nurse | B. | <input type="checkbox"/> |
| C. Industrial Nurse | C. | <input type="checkbox"/> |
| D. Private Duty Nurse | D. | <input type="checkbox"/> |
| E. Supervisory Nurse | E. | <input type="checkbox"/> |
| F. Nursing Instructor | F. | <input type="checkbox"/> |
| G. Head Nurse | G. | <input type="checkbox"/> |
| H. Licensed Practical Nurse | H. | <input type="checkbox"/> |
| I. Nursing Aide or Attendant | I. | <input type="checkbox"/> |
| J. Any of the Above | J. | <input type="checkbox"/> |
| K. Any of the Above
Except H and I | K. | <input type="checkbox"/> |
| L. Others (indicate) | L. | <input type="checkbox"/> |

Directions:

Please indicate your interpretation of the term "rehabilitation" and also indicate whom you think should be members of the "health team" and when rehabilitation should begin. Place a check (✓) in the corresponding box.

5. You interpret the term rehabilitation to mean:

A. the restoration of the handicapped to gainful employment with emphasis on vocational counseling, guidance, training and placement.

A.

B. as defined by the National Council on Rehabilitation as the restoration of the handicapped person to the fullest physical, psychological, social, vocational and economic usefulness of which he is capable.

B.

C. neither of the above.
(Explain)

C.

6. In your opinion, rehabilitation should begin:

A. at the onset of disability.

A.

B. during the convalescent period.

B.

C. during the convalescent period after discharge from the hospital.

C.

D. none of the above.
(Explain)

D.

7. Of the following persons check the ones you think should be members of the "health team":

- A. Doctor and/or Clinical Specialists A.
- B. Registered Professional Nurse B.
- C. Student Nurse C.
- D. Licensed Practical Nurse D.
- E. Nursing Aide or Attendant E.
- F. Physical Therapist F.
- G. Occupational Therapist G.
- H. Social Worker H.
- I. Clinical Psychologist I.
- J. Vocational Counselor J.
- K. Recreational Therapist K.
- L. Spiritual Adviser L.
- M. Dietitian M.
- N. Others N.

APPENDIX C

MASTER TABULATIONS

Interview GuidePHYSICAL PROBLEMS ENCOUNTERED BY 63^a
PARTICIPANTS IN RELATION TO PARAPLEGIC PATIENTS

Respondents	Number in Group	Physical Problems Encountered ^b						
		A	B	C	D	E	F	G
Registered Nurses								
Public health nurse	9	4	3	1	-	-	-	-
Instructor	6	3	5	-	1	1	-	-
Head nurse	5	1	4	-	-	1	-	-
Supervisor	2	2	2	-	-	-	-	-
Private duty	2	2	1	-	-	-	-	-
Allied Medical Professions								
Physical therapist	9	6	5	-	3	1	2	1
Social worker	6	4	3	-	1	-	-	2
Occupational therapist	6	1	3	1	-	-	-	-
Clinical psychologist	2	-	-	-	-	-	-	-
Doctors								
Orthopedist	3	2	3	-	2	-	2	-
Neurosurgeon	3	2	2	-	2	3	1	1
Urologist	3	2	3	-	-	-	-	-
Physiatrist	1	1	1	-	-	1	-	-
Vocational Personnel								
Vocational counselor	2	1	1	-	-	-	-	-
Personnel manager	1	-	-	-	-	-	-	-
Placement supervisor	1	-	-	-	-	-	-	-
Educational therapist	1	-	-	-	-	-	-	-
Prosthetic chief	1	-	-	-	-	-	-	-
Totals	63	31	36	2	9	7	5	4

^aHandicapped persons not included.

^bPhysical problems encountered: A--Skin problems; B--Bowel and bladder; C--Personal hygiene; D--Contractures; E--Spasticity; F--Bracing; G--Pain.

Interview Guide

SOCIAL AND VOCATIONAL PROBLEMS ENCOUNTERED
BY 63^a PARTICIPANTS IN RELATION TO PARAPLEGIC PATIENTS

Respondents	Number in Group	Social Problems ^b					Vocational Problems ^c		
		A	B	C	D	E	A	B	C
Registered Nurses									
Public health nurse	9	-	-	1	-	-	1	-	-
Instructor	6	-	-	-	-	-	-	-	-
Head nurse	5	1	-	-	-	-	-	-	-
Supervisor	2	-	-	-	1	-	-	-	-
Private duty	2	-	-	-	-	-	-	-	-
Allied Medical Professions									
Physical therapist	9	1	2	1	1	-	1	1	-
Social worker	6	1	-	-	2	1	-	2	-
Occupational therapist	6	1	-	-	-	3	-	-	1
Clinical psychologist	2	-	-	-	1	-	-	-	-
Doctors									
Orthopedist	3	-	-	-	-	-	-	1	-
Neurosurgeon	3	-	-	-	-	-	-	-	-
Urologist	3	-	-	-	-	-	-	-	-
Physiatrist	1	-	-	-	-	-	-	-	1
Vocational Personnel									
Vocational counselor	2	1	-	-	-	-	-	-	-
Personnel manager	1	-	-	-	-	-	-	-	1
Placement supervisor	1	-	-	-	-	-	-	-	1
Educational therapist	1	-	-	-	-	-	-	-	-
Prosthetic chief	1	-	-	-	-	-	-	-	-
Totals	63	5	2	2	5	4	2	4	4

^aHandicapped persons not included.

^bSocial problems: A--Marital adjustment; B--Social aspects of bladder and bowel control; C--Understanding of family; D--Family-patient relationship; E--Socialization.

^cVocational problems: A--Economic problems; B--Financial problems; C--Vocational problems.

Interview Guide

PSYCHOLOGICAL PROBLEMS ENCOUNTERED
BY 63^a PARTICIPANTS IN RELATION TO PARAPLEGIC PATIENTS

Respondents	Number in Group	Psychological Problems Encountered ^b								
		A	B	C	D	E	F	G	H	I
Registered Nurses										
Public health nurse	9	1	1	3	3	-	-	-	-	-
Instructor	6	-	2	2	1	-	-	-	-	-
Head nurse	5	-	1	2	1	1	1	1	-	-
Supervisor	2	-	-	1	2	-	-	-	-	-
Private duty	2	1	-	-	-	-	-	-	1	-
Allied Medical Professions										
Physical therapist	9	-	1	1	1	1	1	-	1	-
Social worker	6	-	-	5	1	-	-	-	-	2
Occupational therapist	6	1	1	3	1	-	-	-	1	-
Clinical psychologist	2	-	-	1	1	-	-	1	-	-
Doctors										
Orthopedist	3	-	-	1	2	-	-	-	-	-
Neurosurgeon	3	-	-	-	1	-	-	-	-	-
Urologist	3	-	1	-	-	1	-	-	-	-
Physiatrist	1	-	-	-	-	-	-	-	-	-
Vocational Personnel										
Vocational counselor	2	-	-	2	-	-	-	-	-	-
Personnel manager	1	-	1	-	-	-	-	-	-	-
Placement supervisor	1	-	-	1	-	-	-	-	-	-
Educational therapist	1	-	-	-	-	-	-	-	1	-
Prosthetic chief	1	-	-	-	-	-	-	-	-	-
Totals	63	3	8	22	14	3	2	2	4	2

^aHandicapped persons not included.

^bPsychological problems encountered: A--Worthlessness; B--Depression; C--Emotional problems; D--Adjust to disability; E--Mental attitudes; F--Lack of cooperation; G--Bitterness; H--Lack of initiative; I--Dependency.

Interview GuideRESPONSES OF 63^a SELECTED RESPONDENTS INDICATING THE CONTRIBUTING FACTORS IN RELATION TO PROBLEMS ENCOUNTERED

Respondents	Number in Group	Distribution of Responses ^b				
		A	B	C	D	E
Registered Nurses						
Public health nurse	9	3	2	2	-	-
Instructor	6	1	-	-	2	3
Head nurse	5	1	-	-	3	2
Supervisor	2	2	-	1	1	-
Private duty	2	1	-	-	1	-
Allied Medical Professions						
Physical therapist	9	1	-	-	8	-
Social worker	6	3	-	2	1	1
Occupational therapist	6	4	-	2	1	1
Clinical psychologist	2	-	-	-	-	-
Doctors						
Orthopedist	3	1	-	-	3	-
Neurosurgeon	3	1	-	-	2	-
Urologist	3	-	-	-	3	-
Physiatrist	1	-	-	-	1	-
Vocational personnel						
Vocational counselor	2	-	-	1	1	-
Personnel manager	1	1	-	-	-	-
Placement supervisor	1	-	-	-	-	-
Educational therapist	1	-	-	-	1	-
Prosthetic chief	1	-	-	-	-	-
Totals	63	19	2	8	28	7

^aHandicapped persons not included.

^bDistribution of responses: A--Acceptance of disability; B--Unrealistic goals; C--Family; D--Physical condition; E--Attitude.

Interview Guide

OPINIONS OF 63^a SELECTED RESPONDENTS
AS TO THE NURSE'S ROLE IN THE PHYSICAL
ASPECTS OF THE REHABILITATION OF PARAPLEGIC PATIENTS

Respondents	Number in Group	Responses indicating the Nurse Has A Role in the Physical Aspects of Rehabilitation of Paraplegic Patients		
		Prevention of Complica- tions	Provision for Basic Physical Needs	Provision for A.D.L. ^b and Health Teaching
Registered Nurses				
Public health nurse	9	2	4	9
Instructor	6	2	4	4
Head nurse	5	3	3	5
Supervisor	2	-	1	2
Private duty	2	2	2	2
Allied Medical Professions				
Physical therapist	9	6	5	6
Social worker	6	1	6	1
Occupational therapist	6	3	-	5
Clinical psychologist	2	-	1	1
Doctors				
Orthopedist	3	3	3	2
Neurosurgeon	3	2	3	3
Urologist	3	2	3	2
Physiatrist	1	1	1	1
Vocational Personnel				
Vocational counselor	2	-	1	-
Personnel manager	1	-	1	-
Placement supervisor	1	-	-	1
Educational therapist	1	-	1	-
Prosthetic chief	1	-	-	1
Totals	63	27	39	45

^aHandicapped persons not included.

^bA.D.L.--Activities of Daily Living.

Interview Guide

OPINIONS OF 63^a SELECTED RESPONDENTS CONCERNING
 THE NURSE'S ROLE IN THE PSYCHOLOGICAL, EMOTIONAL, AND
 SPIRITUAL ASPECTS OF THE REHABILITATION OF PARAPLEGIC PATIENTS

Respondents	Number in Group	Responses Indicating the Nurse Has a Role in the Psychological, Emotional, and Spiritual Aspects of Rehabilitation of Paraplegic Patients ^b			
		A	B	C	D
Registered Nurses					
Public health nurse	9	7	7	6	4
Instructor	6	3	6	2	3
Head nurse	5	3	5	2	1
Supervisor	2	2	1	2	2
Private duty	2	2	1	1	-
Allied Medical Professions					
Physical therapist	9	6	4	2	3
Social worker	6	1	3	3	2
Occupational therapist	6	6	2	5	3
Clinical psychologist	2	2	1	1	1
Doctors					
Orthopedist	3	1	-	1	2
Neurosurgeon	3	2	1	-	-
Urologist	3	1	1	1	2
Physiatrist	1	-	-	1	-
Vocational Personnel					
Vocational counselors	2	-	-	1	1
Personnel manager	1	-	1	-	-
Placement supervisor	1	1	1	-	-
Educational therapist	1	1	1	-	-
Prosthetic chief	1	-	-	-	1
Totals	63	38	35	28	25

^aHandicapped persons not included.

^bA--Psychological support; B--Encourage independence; C--Listen to patient; D--Adjustment to disability.

Interview Guide

OPINIONS OF 63^a SELECTED RESPONDENTS
 CONCERNING THE NURSE'S ROLE IN THE SOCIAL
 ASPECTS OF THE REHABILITATION OF PARAPLEGIC PATIENTS

Respondents	Number in Group	Responses Indicating the Nurse Has a Role in the Social Aspects of Rehabilitation of Paraplegic Patients ^b			
		A	B	C	D
Registered Nurses					
Public health nurse	9	2	3	1	3
Instructor	6	1	4	1	-
Head nurse	5	1	2	-	-
Supervisor	2	-	-	-	-
Private duty	2	1	-	-	-
Allied Medical Professions					
Physical therapist	9	1	1	1	-
Social worker	6	-	-	1	1
Occupational therapist	6	5	-	2	2
Clinical psychologist	2	1	-	1	-
Doctors					
Orthopedist	3	1	-	1	-
Neurosurgeon	3	-	-	-	-
Urologist	3	-	-	-	-
Physiatrist	1	-	-	-	-
Vocational Personnel					
Vocational counselor	2	1	1	1	-
Personnel manager	1	-	-	-	-
Placement supervisor	1	-	-	-	-
Educational therapist	1	-	-	-	-
Prosthetic chief	1	-	-	-	-
Totals	63	14	11	9	6

^aHandicapped persons not included.

^bA--Participation in family and community life; B--Teach family care and supply information; C--Initiate referral to social agencies; D--Inform patient of community agencies for rehabilitation and recreation.

Interview Guide

OPINIONS OF 63^a SELECTED RESPONDENTS
 CONCERNING THE NURSE'S ROLE IN THE VOCATIONAL
 ASPECTS OF THE REHABILITATION OF PARAPLEGIC PATIENTS

Respondents	Number in Group	Responses Indicating the Nurse Has a Role in the Vocational Aspects of Rehabilitation of Paraplegic Patients
Registered Nurses		
Public health nurse	9	2
Instructor	6	2
Head nurse	5	1
Supervisor	2	-
Private duty	2	-
Allied Medical Professions		
Physical therapist	9	1
Social worker	6	1
Occupational therapist	6	4
Clinical psychologist	2	-
Doctors		
Orthopedist	3	-
Neurosurgeon	3	-
Urologist	3	-
Physiatrist	1	-
Vocational Personnel		
Vocational counselors	2	2
Personnel manager	1	1
Placement supervisor	1	-
Educational therapist	1	-
Prosthetic chief	1	-
Totals	63	14

^aHandicapped persons not included.

Interview Guide

RESPONSES OF 63^a SELECTED
 RESPONDENTS CONCERNING THE AGENCIES
 USED IN THE REFERRAL OF PARAPLEGIC PATIENTS

Respondents	Number in Group	Agencies ^b					
		A	B	C	D	E	F
Registered Nurses							
Public health nurse	9	6	4	3	1	2	-
Instructor	6	4	3	1	1	1	1
Head nurse	5	2	1	-	1	1	1
Supervisor	2	2	2	2	-	2	-
Private duty	2	-	1	-	1	-	-
Allied Medical Professions							
Physical therapist	9	5	5	1	2	-	-
Social worker	6	4	3	5	2	-	1
Occupational therapist	6	2	6	3	-	1	1
Clinical psychologist	2	-	-	-	-	-	-
Doctors							
Orthopedist	3	2	2	1	2	2	1
Neurosurgeon	3	2	1	-	1	-	2
Urologist	3	1	1	1	-	1	1
Physiatrist	1	-	1	-	-	-	-
Vocational Personnel							
Vocational counselors	2	2	-	2	-	-	1
Personnel manager	1	-	-	-	-	-	-
Placement supervisor	1	-	1	1	-	-	-
Educational therapist	1	-	1	-	1	-	-
Prosthetic chief	1	-	-	-	1	-	-
Totals	63	32	32	20	13	10	9

^aHandicapped persons not included.

^bAgencies: A--Portland Rehabilitation Center; B--Division of Vocational Rehabilitation; C--Welfare agencies; D--Veterans Rehabilitation Services; E--Crippled Children's Division; F--Hospitals with rehabilitative services for paraplegic patients.

Interview Guide

RESPONSES OF 63^a SELECTED
 RESPONDENTS CONCERNING THE AGENCIES
 USED IN THE REFERRAL OF PARAPLEGIC PATIENTS
 (continued)

Respondents	Number in Group	Agencies ^b					
		G	H	I	J	K	L
Registered Nurses							
Public health nurse	9	2	1	1	2	-	1
Instructor	6	-	1	-	-	-	-
Head nurse	5	-	-	1	-	-	-
Supervisor	2	-	-	1	-	-	2
Private duty	2	-	-	-	-	-	-
Allied Medical Professions							
Physical therapist	9	1	2	-	1	1	-
Social worker	6	1	3	5	2	1	-
Occupational therapist	6	2	-	-	1	3	1
Clinical psychologist	2	-	-	-	-	-	-
Doctors							
Orthopedist	3	-	-	-	-	-	-
Neurosurgeon	3	1	-	-	-	-	-
Urologist	3	-	-	-	-	-	-
Physiatrist	1	-	-	-	-	-	-
Vocational Personnel							
Vocational counselors	2	1	1	-	-	-	-
Personnel manager	1	-	-	-	-	-	-
Placement supervisor	1	-	-	-	-	-	-
Educational therapist	1	-	-	-	-	-	-
Prosthetic chief	1	-	-	-	-	-	-
Totals	63	8	8	8	6	5	4

^aHandicapped persons not included.

^bAgencies: G--Visiting Nurse Association; H--Family counseling;
 I--Red Cross; J--Special Education; K--Clubs for handicapped persons;
 L--National Foundation for Infantile Paralysis.

Interview Guide

RESPONSES OF 63^a SELECTED
 RESPONDENTS CONCERNING THE AGENCIES
 USED IN THE REFERRAL OF PARAPLEGIC PATIENTS
 (continued)

Respondents	Number in Group	Agencies ^b					
		M	N	O	P	Q	R
Registered Nurses							
Public health nurse	9	2	2	-	-	-	-
Instructor	6	2	-	1	-	-	-
Head nurse	5	-	1	-	1	1	2
Supervisor	2	-	-	-	-	-	-
Private duty	2	-	-	-	-	-	-
Allied Medical Professions							
Physical therapist	9	-	-	1	2	-	-
Social worker	6	-	1	1	-	1	1
Occupational therapist	6	-	-	1	-	-	-
Clinical psychologist	2	-	-	-	-	-	-
Doctors							
Orthopedist	3	-	-	-	1	-	-
Neurosurgeon	3	-	-	-	-	-	-
Urologist	3	-	-	-	-	-	1
Physiatrist	1	-	-	-	-	-	-
Vocational Personnel							
Vocational counselor	2	-	-	-	-	1	-
Personnel manager	1	-	-	-	-	-	-
Placement supervisor	1	-	-	-	-	-	-
Educational therapist	1	-	-	-	-	1	-
Prosthetic chief	1	-	-	-	-	-	-
Totals	63	4	4	4	4	4	4

^aHandicapped persons not included.

^bAgencies: M--Local health departments; N--Service Clubs; O--Social service; P--Occupational Therapy; Q--Employment and Placement Service; R--Nursing homes.

Interview Guide

RESPONSES OF 63^a SELECTED
 RESPONDENTS CONCERNING THE AGENCIES
 USED IN THE REFERRAL OF PARAPLEGIC PATIENTS
 (continued)

Respondents	Number in Group	Agencies ^b					
		S	T	U	V	W	X
Registered Nurses							
Public health nurse	9	-	-	-	1	-	-
Instructor	6	-	-	-	-	-	-
Head nurse	5	-	-	-	-	-	-
Supervisor	2	-	1	-	-	-	-
Private duty	2	-	-	-	-	-	-
Allied Medical Professions							
Physical therapist	9	-	1	-	-	-	-
Social worker	6	1	-	-	-	-	-
Occupational therapist	6	-	-	2	-	1	1
Clinical psychologist	2	-	-	-	-	-	-
Doctors							
Orthopedist	3	-	-	-	-	-	-
Neurosurgeon	3	-	-	-	-	-	-
Urologist	3	-	-	-	-	-	-
Physiatrist	1	-	-	-	-	-	-
Vocational Personnel							
Vocational counselors	2	-	-	-	-	-	-
Personnel manager	1	1	-	-	-	-	-
Placement supervisor	1	-	-	-	-	-	-
Educational therapist	1	1	-	-	-	-	-
Prosthetic chief	1	-	-	-	-	-	-
Totals	63	3	2	2	1	1	1

^aHandicapped persons not included.

^bAgencies: S--Industries; T--Visiting physical therapist;
 U--Psychologist; V--Private duty nurses; W--Public library;
 X--Correspondence schools.

Interview Guide

RESPONSES OF 63^a SELECTED
 RESPONDENTS CONCERNING THE AGENCIES
 USED IN THE REFERRAL OF PARAPLEGIC PATIENTS
 (continued)

Respondents	Number in Group	Agencies ^b				
		Y	Z	X ¹	Y ¹	Z ¹
Registered Nurses						
Public health nurse	9	-	-	-	-	1
Instructor	6	1	-	-	-	-
Head nurse	5	-	-	-	-	-
Supervisor	2	-	-	-	-	-
Private duty	2	-	-	-	-	-
Allied Medical Professions						
Physical therapist	9	-	-	-	-	-
Social worker	6	-	-	-	1	-
Occupational therapist	6	-	-	-	-	-
Clinical psychologist	2	-	-	-	-	-
Doctors						
Orthopedist	3	-	1	-	-	-
Neurosurgeon	3	-	-	1	-	-
Urologist	3	-	-	-	-	-
Physiatrist	1	-	-	-	-	-
Vocational Personnel						
Vocational counselor	2	-	-	-	-	-
Personnel manager	1	-	-	-	-	-
Placement supervisor	1	-	-	-	-	-
Educational therapist	1	-	-	-	-	-
Prosthetic chief	1	-	-	-	-	-
Totals	63	1	1	1	1	1

^aHandicapped persons not included.

^bAgencies: Y--Psychiatric service; Z--Oregon Society for Crippled Children and Adults, Inc.; X¹--Medical specialists; Y¹--Veterans Assistance; Z¹--No referrals.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS CONCERNING THE
EXPRESSED CONCEPT OF THE TERM "ROLE" AS "THE COMPLEX
BEHAVIOR THAT IS EXPECTED OF ONE WHO OCCUPIES A GIVEN POSITION"

Respondents	Number in Group	Distribution of Responses		
		My Opinion	Not My Opinion	No Opinion
Registered Nurses				
Public health nurse	9	7	1	1
Instructor	6	6	...	...
Head nurse	5	5	...	...
Supervisor	2	2	...	...
Private duty	2	2	...	...
Allied Medical Professions				
Physical therapist	9	7	1	1
Social workers	6	5	...	1
Occupational therapist	6	6	...	...
Clinical psychologist	2	2	...	...
Doctors				
Orthopedist	3	3	...	...
Neurosurgeon	3	2	...	1
Urologist	3	2	...	1
Physiatrist	1	1	...	...
Vocational Personnel				
Vocational counselor	2	2	...	...
Personnel manager	1	...	1	...
Placement supervisor	1	1	...	...
Educational therapist	1	1	...	...
Prosthetic chief	1	1	...	...
Totals	63	55	3	5

^aHandicapped persons not included.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS
 CONCERNING THE EXPRESSED CONCEPT OF THE TERM
 "NURSE" MEANING A REGISTERED PROFESSIONAL NURSE

Respondents	Number in Group	Distribution of Responses		
		My Opinion	Not My Opinion	No Opinion
Registered Nurses				
Public health nurse	9	6	3	...
Instructor	6	1	5	...
Head nurse	5	4	1	...
Supervisor	2	...	1	1
Private duty	2	1	1	...
Allied Medical Professions				
Physical therapist	9	6	2	1
Social worker	6	4	2	...
Occupational therapist	6	3	3	...
Clinical psychologist	2	1	...	1
Doctors				
Orthopedist	3	2	1	...
Neurosurgeon	3	3	...	...
Urologist	3	2	...	1
Physiatrist	1	1	...	...
Vocational Personnel				
Vocational counselor	2	1	1	...
Personnel manager	1	...	...	1
Placement supervisor	1	1	...	...
Educational therapist	1	1	...	...
Prosthetic chief	1	1	...	...
Totals	63	38	20	5

^aHandicapped persons not included.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS CONCERNING
THE EXPRESSED CONCEPT OF THE TERM "NURSING" AS DEFINED^b

Respondents	Number in Group	Distribution of Responses		
		My Opinion	Not My Opinion	No Opinion
Registered Nurses				
Public health nurse	9	8	1	...
Instructor	6	6	...	...
Head nurse	5	5	...	...
Supervisor	2	2	...	...
Private duty	2	2	...	...
Allied Medical Professions				
Physical therapist	9	8	1	...
Social worker	6	5	...	1
Occupational therapist	6	6	...	...
Clinical psychologist	2	2	...	...
Doctors				
Orthopedist	3	3	...	...
Neurosurgeon	3	3	...	...
Urologist	3	2	...	1
Physiatrist	1	1	...	...
Vocational Personnel				
Vocational counselors	2	2	...	...
Personnel manager	1	1	...	...
Placement supervisor	1	1	...	...
Educational therapist	1	1	...	...
Prosthetic chief	1	1	...	...
Totals	63	59	2	2

^aHandicapped persons not included.

^b"Nursing in its broadest sense may be defined as an art and a science which involves the whole patient--body, mind, and spirit; promotes his spiritual, mental, and physical health by teaching and by example; stresses health education and health preservation, as well as ministrations to the sick; involves the care of the patient's environment--social and spiritual as well as physical and gives health service to family and community as well as to the individual."⁽³³⁾

Questionnaire

RESPONSES OF 63^a SELECTED RESPONDENTS
CONCERNING THE INTERPRETATION OF THE TERM "NURSE"

Respondents	Number in Group	Distribution of Responses ^b										
		A	B	C	D	E	F	G	H	I	J	K
Registered Nurses												
Public health nurse	9	8	7	7	7	7	7	7	2	2	1	-
Instructor	6	5	5	4	4	5	5	5	3	3	1	-
Head nurse	5	5	5	5	5	5	5	2	1	-	-	-
Supervisor	2	1	2	1	1	1	1	1	1	1	-	-
Private duty	2	1	1	1	2	1	1	1	1	1	-	-
Allied Medical Professions												
Physical therapist	9	9	9	9	9	8	9	1	1	-	-	-
Social worker	6	5	6	5	5	5	4	5	1	1	-	-
Occupational therapist	6	5	6	5	5	5	5	5	3	2	-	-
Clinical psychologist	2	1	1	1	1	1	1	1	1	1	-	1
Doctors												
Orthopedist	3	2	3	2	3	3	2	3	1	-	-	-
Neurosurgeon	3	3	3	3	3	3	3	3	-	-	-	-
Urologist	3	3	3	3	3	3	3	3	1	1	-	-
Physiatrist	1	1	1	1	1	1	1	1	-	-	-	-
Vocational Personnel												
Vocational counselor	2	2	2	2	2	2	2	2	1	-	-	-
Personnel manager	1	-	-	1	-	-	-	-	-	-	-	-
Placement supervisor	1	-	-	-	-	-	-	-	-	-	1	-
Educational therapist	1	1	1	1	1	1	1	1	-	-	-	-
Prosthetic chief	1	1	1	1	1	1	1	1	-	-	-	-
Totals	63	53	56	52	53	53	50	55	18	14	3	1

^aHandicapped persons not included.

^bInterpretations: A--Public health nurse; B--General duty nurse; C--Industrial nurse; D--Private duty nurse; E--Supervisory nurse; F--Nursing instructor; G--Head nurse; H--Licensed practical nurse; I--Nursing aide or attendant; J--Others; K--Did not answer question.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS CONCERNING
THE EXPRESSED CONCEPT OF THE TERM "REHABILITATION"

Respondents	Number in Group	Concept of Term Rehabilitation ^b			
		A	B	C	D
Registered Nurses					
Public health nurse	9	-	8	1	-
Instructor	6	-	6	-	-
Head nurse	5	-	5	-	-
Supervisor	2	-	2	-	-
Private duty	2	-	1	-	1
Allied Medical Professions					
Physical therapist	9	-	9	-	-
Social worker	6	-	5	-	1
Occupational therapist	6	-	6	-	-
Clinical psychologist	2	-	2	-	-
Doctors					
Orthopedist	3	-	3	-	-
Neurosurgeon	3	-	3	-	-
Urologist	3	-	2	-	1
Physiatrist	1	-	1	-	-
Vocational Personnel					
Vocational counselor	2	1	1	-	-
Personnel manager	1	-	1	-	-
Placement supervisor	1	-	1	-	-
Educational therapist	1	-	1	-	-
Prosthetic chief	1	-	1	-	-
Totals	63	1	58	1	3

^aHandicapped persons are not included.

^bConcept of term rehabilitation: A--The restoration of the handicapped to gainful employment with emphasis on vocational counseling, guidance, training, and placement. B--As defined by the National Council on Rehabilitation as the restoration of the handicapped person to the fullest physical, psychological, social, vocational and economic usefulness of which he is capable. C--Neither of the above. D--Checked A and B.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS CONCERNING
THE PERIOD IN WHICH REHABILITATION SHOULD BE INITIATED

Respondents	Number in Group	Rehabilitation Should Begin ^b				
		A	B	C	D	E
Registered Nurses						
Public health nurse	9	7	1	-	1	-
Instructor	6	6	-	-	-	-
Head nurse	5	2	2	-	-	1
Supervisor	2	2	-	-	-	-
Private duty	2	1	-	-	1	-
Allied Medical Professions						
Physical therapist	9	7	1	-	1	-
Social worker	6	5	-	-	1	-
Occupational therapist	6	5	-	-	1	-
Clinical psychologist	2	2	-	-	-	-
Doctors						
Orthopedist	3	3	-	-	-	-
Neurosurgeon	3	2	1	-	-	-
Urologist	3	2	1	-	-	-
Physiatrist	1	1	-	-	-	-
Vocational Personnel						
Vocational counselor	2	2	-	-	-	-
Personnel manager	1	1	-	-	-	-
Placement supervisor	1	-	-	-	1	-
Educational therapist	1	1	-	-	-	-
Prosthetic chief	1	-	1	-	-	-
Totals	63	49	7	0	6	1

^aHandicapped persons not included.

^bRehabilitation should begin: A--At the onset of the disability.
B--During the convalescent period. C--During the convalescent period
after discharge from the hospital. D--None of the above. E--Checked
B and C.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS
AS TO WHO SHOULD BE MEMBERS OF THE "HEALTH TEAM"

Respondents	Number in Group	Distribution of Responses ^b						
		A	B	C	D	E	F	G
Registered Nurses								
Public health nurse	9	8	8	6	6	6	8	7
Instructor	6	6	6	5	6	6	6	6
Head nurse	5	5	5	5	3	4	5	5
Supervisor	2	2	2	1	-	-	2	2
Private duty	2	2	2	1	1	-	2	2
Allied Medical Professions								
Physical therapist	9	9	9	7	4	5	9	9
Social worker	6	6	6	5	4	4	6	6
Occupational therapist	6	6	6	4	4	4	6	6
Clinical psychologist	2	2	2	-	-	-	1	2
Doctors								
Orthopedist	3	3	3	2	-	1	3	3
Neurosurgeon	3	3	3	2	2	3	3	3
Urologist	3	2	2	2	1	2	2	2
Physiatrist	1	1	1	1	-	-	1	1
Vocational Personnel								
Vocational counselor	2	2	2	1	-	-	2	2
Personnel manager	1	1	1	-	-	-	-	1
Placement supervisor	1	-	-	-	-	-	-	-
Educational therapist	1	1	1	1	1	-	1	-
Prosthetic chief	1	1	1	1	-	-	1	1
Totals	63	60	60	45	32	35	58	58

^aHandicapped persons not included.

^bA--Doctor and/or clinical specialists. B--Registered professional nurse. C--Student nurse. D--Licensed practical nurse. E--Nursing aide or attendant. F--Physical therapist. G--Occupational therapist.

Questionnaire

OPINIONS OF 63^a SELECTED RESPONDENTS
AS TO WHO SHOULD BE MEMBERS OF THE "HEALTH TEAM"
(continued)

Respondents	Number in Group	Distribution of Responses ^b						
		H	I	J	K	L	M	N
Registered Nurses								
Public health nurse	9	8	8	7	6	7	6	3
Instructor	6	6	6	6	6	6	6	3
Head nurse	5	5	4	5	5	5	4	2
Supervisor	2	2	1	2	-	1	1	-
Private duty	2	1	-	2	-	1	2	1
Allied Medical Professions								
Physical therapist	9	8	8	7	5	6	5	-
Social worker	6	6	5	6	6	5	5	2
Occupational therapist	6	6	6	6	4	4	5	3
Clinical psychologist	2	2	2	2	2	2	-	-
Doctors								
Orthopedist	3	3	2	3	1	2	1	-
Neurosurgeon	3	3	2	3	3	3	3	2
Urologist	3	2	1	2	1	1	1	2
Physiatrist	1	1	1	1	1	1	1	1
Vocational Personnel								
Vocational counselor	2	2	2	2	-	-	-	1
Personnel manager	1	1	-	1	-	1	-	-
Placement supervisor	1	-	-	-	-	-	-	1
Educational therapist	1	-	1	-	-	1	1	1
Prosthetic chief	1	1	-	1	-	-	-	-
Totals	63	57	49	56	40	46	41	22

^aHandicapped persons not included.

^bH--Social worker. I--Clinical psychologist. J--Vocational counselor. K--Recreational therapist. L--Spiritual adviser. M--Dietitian. N--Others.

QuestionnaireRESPONSES OF 7 HANDICAPPED PERSONS TO
DEFINITIONS OF THE TERMS "ROLE," "NURSING," AND "NURSE"

Handicapped Persons	Definition of "Role" ^a			Definition of "Nursing" ^b			Definition of "Nurse" ^c		
	A	B	C	A	B	C	A	B	C
"A"	1	-	-	1	-	-	-	1	-
"B"	1	-	-	1	-	-	1	-	-
"C"	1	-	-	1	-	-	-	1	-
"D"	-	1	-	1	-	-	-	1	-
"E"	-	-	1	1	-	-	-	1	-
"F"	1	-	-	1	-	-	1	-	-
"G"	1	-	-	1	-	-	1	-	-
Totals	5	1	1	7	0	0	3	3	1

^a"Role is the complex behavior that is expected of one who occupies a given position."⁽⁴²⁾ A--My Opinion. B--Not My Opinion. C--No Opinion.

^b"Nursing in its broadest sense may be defined as an art and a science which involves the whole patient--body, mind and spirit; promotes his spiritual, mental and physical health by teaching and by example; stresses health education and health preservation, as well as ministrations to the sick; involves the care of the patient's environment--social and spiritual as well as physical; and gives health service to the family and community as well as to the individual."⁽³³⁾
A--My Opinion. B--Not My Opinion. C--No Opinion.

^cThe term nurse means a registered professional nurse.
A--My Opinion. B--Not My Opinion. C--No Opinion.

Questionnaire

RESPONSES OF 7 HANDICAPPED PERSONS
 CONCERNING THE INTERPRETATION OF THE TERM "NURSE"

Handicapped Persons	Distribution of Responses ^a								
	A	B	C	D	E	F	G	H	I
"A"	1	1	1	1	1	1	1	1	1
"B"	1	1	1	1	1	1	1	-	-
"C"	1	1	1	1	1	1	1	1	1
"D"	1	1	1	1	1	1	1	1	1
"E"	1	1	1	1	1	1	1	1	1
"F"	1	1	1	1	1	1	1	-	-
"G"	1	1	1	1	1	1	1	-	-
Totals	7	7	7	7	7	7	7	4	4

^aA--Public health nurse. B--General duty nurse. C--Industrial nurse.
 D--Private duty nurse. E--Supervisory nurse. F--Nursing instructor.
 G--Head nurse. H--Licensed practical nurse. I--Nursing aide or
 attendant.

Questionnaire

RESPONSES OF 7 HANDICAPPED PERSONS
 CONCERNING THE TERM "REHABILITATION" AND THE
 PERIOD OF ILLNESS REHABILITATION SHOULD BE INITIATED

Handicapped Persons	Concept of Term Rehabilitation ^a			Rehabilitation Should Be Initiated ^b			
	A	B	C	A	B	C	D
"A"	-	1	-	-	-	1	-
"B"	-	1	-	1	-	-	-
"C"	-	1	-	-	-	1	-
"D"	-	1	-	1	-	-	-
"E"	-	1	-	-	1	-	-
"F"	-	1	-	-	1	-	-
"G"	-	1	-	-	1	-	-
Totals	0	7	0	2	3	2	0

^aConcept of term rehabilitation:

A--The restoration of the handicapped to gainful employment with emphasis on vocational counseling, guidance, training and placement.

B--As defined by the National Council on Rehabilitation: The restoration of the handicapped to the fullest physical, psychological, social, vocational and economic usefulness of which he is capable.

C--Neither of the above.

^bRehabilitation should be initiated:

A--At the onset of disability. B--During the convalescent period.

C--During the convalescent period after discharge from the hospital.

D--None of the above.

Questionnaire

RESPONSES OF 7 HANDICAPPED PERSONS
 CONCERNING THE COMPONENT MEMBERS OF THE "HEALTH TEAM"

	Handicapped Persons							Totals
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	
Doctor and/or Clinical Specialist	-	1	1	1	1	1	1	6
Registered Professional Nurse	-	1	1	1	1	1	1	6
Student Nurse	-	1	1	1	1	-	-	4
Licensed Practical Nurse	-	-	1	-	-	-	-	1
Nursing Aide or Attendant	-	-	-	-	-	-	-	0
Physical Therapist	-	1	1	1	1	1	1	6
Occupational Therapist	-	1	1	1	-	1	1	5
Social Worker	-	1	1	-	-	1	-	3
Clinical Psychologist	-	1	1	-	1	-	1	4
Vocational Counselor	-	-	1	1	1	1	1	5
Recreational Therapist	-	1	-	1	-	1	-	3
Spiritual Adviser	-	1	1	-	1	1	1	5
Dietitian	-	1	-	-	-	1	1	3
Others	1	-	-	-	-	-	-	1

Typed by
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