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Community case management by a certified rehabilitation nurse

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COMMUNITY CASE MANAGEMENT BY A CERTIFIED REHABILITATION NURSE

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By

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ABSTRACT

COMMUNITY CASE MANAGEMENT BY A CERTIFIED REHABILITATION NURSE

by Karen Blair

The purpose of this descriptive, retrospective study was to compare the self-care and referral needs identified before and after the implementation of case management by a certified rehabilitation nurse. Chart audits were conducted on 14 subjects accepted into a residential training program in a community independent living center. Seven subjects received care prior to implementation of nurse case management, and 7 subjects received case management by the nurse case manager. Self-care and referral needs were compared using categories from the Omaha Classification Scheme for Client Problems in Community Health Nursing. This study indicates that the nurse identified a greater number of self-care and referral needs and that the needs were identified earlier in the rehabilitation process. The most important of these needs included physiological and health behavior issues. Implications of the study include the recommendation for greater participation by rehabilitation nurses in community rehabilitation.

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INTRODUCTION

Attitudes toward disability have varied according to the culture and times. Society has been slow to recognize and respond to the needs of those with disabilities. It was not until the eighteenth century that even small changes began to occur in social, medical, and legal attitudes. The nineteenth century brought the beginnings of therapeutic treatment of disabilities (Dittmar, 1989). Beginning with the World War II era, changes in the twentieth century brought about major shifts in society's attitudes toward disability. Advances in battlefield surgical and medical care resulted in greater survival rates for veterans, although many were disabled. Welcomed as heroes, these disabled veterans helped to shed a more positive light on disability. Advances in technology, such as the development of aluminum and plastics, led to improvements in quality of life for those with disabilities. The use of aluminum for wheelchairs and plastics for prostheses provided greater mobility, and thus visibility, as well (Shivell, personal communication, 1995). These advances made the greatest impact on the scope and development of rehabilitation. The speciality of rehabilitation has become an important means for assisting individuals with disabilities to reach their maximum potential (Dittmar, 1989).

Nursing is an important member of the specialty of rehabilitation. As a member of the rehabilitation team, nurses utilize a holistic approach to work with the client and family. The rehabilitation nurse functions as caregiver, coordinator, educator, leader, collaborator, facilitator, liaison, consultant, discharge planner, and researcher (Dittmar, 1989). Rehabilitation nurses use a

caring, creative, and optimistic approach to focus on enhancing the self-care capacity of the client and the family (Blake, 1991; Dittmar, 1989).

Rehabilitation is a dynamic, assistive process of planned change that focuses on the achievement of maximum independence and autonomy for individuals with disabilities (Dittmar, 1989). Its success is measured by the degree to which individuals are able to return to their previous environments and live satisfying lives (Waters, 1987).

In the twentieth century, chronic illness has become the leading health problem. It is estimated that at least 25% of the population is affected by chronic illness and disability (Dittmar, 1989). The increase in the survival and longevity of those affected with chronic illness and disabilities creates a further demand for rehabilitation. However, decreased lengths in hospital stays seriously limit the degree to which the initial rehabilitation process is able to facilitate the achievement of maximum independence and quality of life (Dittmar, 1989; Griffin, 1993).

Statement of the Problem

As a result of a physical disability, there are complex medical or clinical sequelae that alter body functions. These sequelae can result in a variety of self-care needs and issues. These problems can adversely affect the perceived quality of life of an individual with a disability, the ability to participate in daily activities on all levels, and the ability to cope effectively with the consequences (Cyr, 1989; Whitman, 1991). Disability care is health care involving the treatment and prevention of the sequelae of disability. The role of the rehabilitation nurse in disability care is to identify self-care needs and appropriate interventions. The rehabilitation nurse provides education, support, and

resources in order for the individual to attain a maximum level of health (Warms, 1987).

The relationship between effective coping and perceived quality of life has been shown to be positive. Disability results in tremendous physical and emotional stress. Effective coping strategies need to be strengthened or learned (Nieves, Charter, & Aspinall, 1991). Denial, depression, and poor self-esteem limit the extent to which individuals are able to participate in their initial rehabilitation. Denial of the injury and its consequences prevent an individual from participating in the teaching-learning process because the individual does not recognize its importance. Repression of feelings regarding the losses and changes in lifestyle can result in depression, social isolation, and noncompliance (Altman & Smith, 1992). The degree to which depression interferes with the teaching-learning process depends upon the severity of its manifestations. Feelings of low self-esteem, resulting in caution, anxiety, and fear of failure also interfere with the teaching-learning process (White, 1989). Individuals with acquired disabilities may leave the rehabilitation program physically prepared for the world outside the rehabilitation setting. However, due to concurrent psychological and emotional issues and decreased lengths of hospital stay, they may not have had sufficient time to integrate newly learned skills into their self-care behaviors to enable them to function adequately in the outside world and continue the rehabilitation process (Dittmar, 1989; Griffin, 1993).

The ability to live a satisfying life outside the home also may be hampered for individuals with congenital disabilities. They may be overprotected by their families and the special education system. Often, they perceive little control over events in their lives (Conwill, 1993; Price, 1990). The tendency to maintain a

highly structured and controlled environment in the school and home environments may foster dependent behaviors, leading to learned helplessness (Conwill, 1993). This type of environment does not provide adequate support or opportunities to allow these individuals to initiate and sustain behavior and learning (Deci, Hodges, Pierson, & Tomassone, 1992; Graham, 1989; Price, 1990). Many of the emotional and social implications of disability have devastating consequences on the lifestyle and perception of life goals for these individuals (Graham, 1989).

Statement of Need

Rehabilitation for individuals with congenital or acquired disabilities is an ongoing lifetime process. Power (1989) stated that after discharge from initial rehabilitation, disabled individuals and their families often require further reinforcement of teaching, and need additional information and resource referrals. Families may need assistance in balancing their responsibilities with their needs. Disabled family members may need continued support to maximize their potential physically, emotionally, psychologically, socially, and vocationally (Dittmar, 1989; Power, 1989).

Rehabilitation occurs in many settings. Acute hospital rehabilitation centers, free-standing centers, skilled facilities, and community transitional living programs are examples of those settings (Castree & Barnes, 1993; Kochersberger, Hielema, & Westlund, 1994; Payne, 1993). Because of shortened lengths of stay, clients may not be adequately prepared to achieve their maximum potential independence beyond the initial rehabilitation process. This lack of preparation may require individuals with disabilities to learn to do many activities in the home and community differently than in the initial

rehabilitation setting. They do this without the guidance and teaching available to them in the initial rehabilitation setting. In order for these individuals to be able to make the transition to home and community successfully, rehabilitation needs to extend beyond the initial acute hospital phase and into the community and home environments (Yoshida, 1994).

Rehabilitation, as a lifetime process, is only begun in the hospital environment (Dittmar, 1989). After initial rehabilitation, individuals with disabilities are vulnerable to regression in their self-care abilities. This may be due to a lack of preparation and confidence on the part of the individual and family. It may also be due, in part, to overprotection of the individual by the family (Gibbon, 1994). Community-based independent living centers are important resource agencies for those with disabilities and their families. Clients can obtain individual, group, and family counseling, and educational and vocational counseling. In addition, they can receive training in independent living skills (Blackwell, 1993).

Independent living programs offer skills training for management of medications, health problems, and finances; training for food preparation, grooming, and self-care; and assistance with finding employment. Initial assessment for these programs involves identification of skills, deficits, resources, and training needs. Training involves the acquisition of skills, problem-solving, and opportunities for community application (Blackwell, 1993).

Independent living programs also offer counseling regarding such concerns as recreation for leisure, friendship and dating, basic communication skills, personal effectiveness, and coping (Blackwell, 1993). Psychosocial aspects of disability are an important component in any rehabilitation setting.

Functioning in these areas is influenced by the consequences of disability. The inability to cope with the implications of these consequences places an individual at higher risk of developing complications in all areas of human functioning (Altman & Smith, 1992; Drench, 1994).

In 1991 in the state of California, there were only two formal independent living programs for individuals with physical disabilities. One was a day program. The other, a unique, live-in, short-stay program offered by the independent living center, was utilized for this study. This program was the only live-in community program in California (Burns, personal communication, 1991). The home environment, provided by such a live-in program, provides opportunities for real-life learning that were not available in initial rehabilitation settings.

There was only a small sample size available since the program's facilities housed a maximum of six clients at one time. Because of the small sample size, and the fact that the literature does not address similar community-based programs, this discriptive study examined the role(s) of a rehabilitation nurse as case manager in an independent living program.

The goals of the residential training program in this study are to maximize the independent living potential of the clients and maximize the number of clients served. Identifying appropriate clients in a shorter period of time would eliminate unnecessary vacancies. However, two problems interfere with these goals:

1. Self-care needs are not identified during screening.

2. Clients are occasionally inappropriately accepted into the program rather than being referred to other programs better able to serve their needs.

Prior to this study, nurses were not involved in the application screening process. The application screening process for this residential training program

included an application, questionnaire, request for medical records, an independent living skills evaluations by a therapist, and a team interview. The application and questionnaire included a history of disability, benefits, social network, work and education history, and self-evaluation of independent living skills. The original application and questionnaire did not address self-care needs.

The limitations of adequate screening during the application process resulted in problems regarding early determination of client appropriateness for the training program. The screening process was inadequate for timely identification of clients in need of referrals to outside agencies. Unidentified self-care needs interfere with the initial screening process and with the independent living skills training process later on. Wide variations in the frequency of client contact during screening can be problematic because of delays in the identification of: (a) clients appropriate for an independent living program, (b) clients in need of other services prior to acceptance, and (c) clients in need of referral to other agencies. These delays can prolong clients' acceptance into such a program.

In the rehabilitation setting, nurses must have an extensive knowledge of anatomy, physiology, kinesiology, the psychological impact of disability, community resources, group dynamics, and teaching-learning principles and strategies The nurse functions as caregiver, coordinator, educator, leader, collaborator, facilitator, liaison, consultant, discharge planner, and researcher (Dittmar, 1989). Nurses have a strong theoretical foundation in biological and social sciences, health maintenance, disease processes, and medications (Dittmar, 1989). Training and expertise in the ramifications of adjusting to

alterations in lifestyle and resultant self-care needs qualifies the rehabilitation nurse as an appropriate health care professional to identify and address these self-care needs and issues (Cyr, 1989; Dittmar, 1989).

Purpose of the Study

The purpose of this descriptive study was to examine the role of a rehabilitation nurse case manager in the screening of clients applying for the residential training program of a local independent living center. Prior to the implementation of case management by a certified rehabilitation nurse, other health professionals provided care for clients using a collaborative team approach. After the implementation of case management by a certified rehabilitation nurse, the nurse and other health professionals were members of the collaborative team. The purpose of this study was to describe the differences in identification of self-care and referral needs of clients before and after case management by a certified rehabilitation nurse in an independent living program.

Research Questions

1. Did the early identification of appropriate clients by the certified rehabilitation nurse decrease entry time into the residential training program?
2. When were self-care and referral needs identified?
3. What types of self-care and referral needs were identified in the application screening process by the certified rehabilitation nurse case manager?

Definition of Terms

The following definition of terms were used in this study:

1. The Certified Rehabilitation Nurse Case Manager was a certified rehabilitation nurse who identified, secured, and coordinated services in the

residential training program. The certified rehabilitation nurse screened clients for appropriateness for training and/or referrals to other agencies (Dittmar, 1989).

2. Case Management was the process utilized by the certified rehabilitation nurse case manager. It included ongoing evaluation of client needs and progress, the plan of care, and its effectiveness and appropriateness. It also included client advocacy and the teaching of self-advocacy and health care to clients (Dittmar, 1989; Orem, 1991; Task Force on Case Management in Nursing, 1988).

3. The Residential Training Program was a program that offered independent living skills training to its clients. The clients lived in 1 of 2 houses that simulated real-life experiences in independent living. The training included the teaching of independent living skills (Burns, personal communication, 1991).

4. Independent Living Skills were skills necessary to live independently. These skills included management of time, finances, personal care, attendant care, and community mobility. In addition, counseling was provided regarding recreational interests, prevocational and vocational interests, and personal and psychosocial needs. Measurement of a client's level of ability for independent living was accomplished through self-evaluation and performance evaluations (Burns, personal communication, 1991).

5. The Application Process began with the mailing of an application packet to the client and ended with acceptance of the client into the program. The process involved 6 steps: (a) mailing of the application and questionnaire; (b) receipt of the application and questionnaire, medical and psychological records, and letters of recommendation; (c) review of these items;

(d) evaluation of independent living skills; (e) interview by the program interdisciplinary team members; and (f) acceptance into the program with either placement on the waiting list or assignment of a move-in date (Burns, personal communication, 1991).

6. Entry Time was the number of days from the mailing of the application packet to the client to the time of the client's acceptance into the program (Burns, personal communication, 1991).

7. Self-Care Needs were skills or actions needed by an individual to maintain human functioning and well-being. Examples include skin care, bowel care, and bladder care (Dittmar, 1989; Orem, 1991).

8. Referral Needs are resources or services that are needed by an individual to assist in the maintainence of human functioning and well-being. Examples include attendant care and in-home support services (Dittmar, 1989).

Summary

The numbers of persons with disabilities are increasing. At least 25% of the population of the United States have one or more disabilities. More individuals are restricted in their activities and are using one or more assistive devices (Dittmar, 1989). The economic constraints on health care are demonstrated in the shortened lengths of stay allowed for initial hospital-based rehabilitation (Griffin, 1993). Rehabilitation for individuals with disabilities is an ongoing process toward the achievement of their maximum potential. Community-based independent living centers provide services that support these individuals in their efforts. The rehabilitation nurse is a key health care professional in identifying and addressing self-care needs and issues resulting from disability because of rehabilitation nursing's theoretical foundation in

biological and social sciences, health maintenance, disease processes and sequelae, and medications that differs from other disciplines (Dittmar, 1989). The certified rehabilitation nurse, as case manager in the community setting, facilitates the integration of self-care skills into self-care behaviors and the earlier assumption of active participation in lifetime rehabilitation by individuals with disabilities.

Chapter 2

REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK

The rehabilitation nurse brings a diverse knowledge base to the community setting. The nature of rehabilitation demands that its nurses possess skills and expertise encompassing disability and its sequelae, self-care, and case management.

Rehabilitation nurses work with persons with a variety of disabilities. The certified rehabilitation nurse must possess knowledge and expertise encompassing the variations in disability and associated sequelae. In the rehabilitation setting, the rehabilitation nurse functions as case manager and collaborates with other members of the rehabilitation team to empower disabled individuals and their families to identify and take responsibility for their self-care needs.

Disability

The terms disability and handicap are often used interchangeably. However, they are not the same. Dittmar (1989) defines disability as the "inability to perform some key life functions" (p. 7). Examples of disability include spinal cord injury, traumatic brain injury, and amputation (Association of Rehabilitation Nurses, 1994). Handicap is defined as the "interaction of a person with a disability with the environment" (Dittmar, 1989, p.7). Examples of handicaps include an inability to access a building or to obtain services because of environmental or social barriers (Association of Rehabilitation Nurses, 1994). For this study, disability is defined as any physical or psychological problem which impedes an individual's ability to perform any life function.

It is difficult to determine the true number of individuals with disabilities (Dittmar, 1989). Not all individuals with disabilities are able to obtain needed rehabilitation services. Statistics cannot be obtained for those individuals who are not accounted for in the system (Dittmar, 1989). Disabilities range from virtually invisible to highly visible. They may be acquired or congenital. There are physical, developmental, and mental disabilities (Denson, 1987). The numbers of those with disabilities are growing. At least 25% of the population of the United States have one or more disabilities (Dittmar, 1989). Today, there are more individuals with restrictions in their activities and dependence on 1 or more assistive devices. The numbers of individuals enrolled in Medicare has risen from 19.5 million in 1967 to 31.5 million in 1991. By age group, those between the ages of 75 and 79 years have the largest enrollment in Medicare. The enrollments by age groups ranged from 1.3 million to 6.1 million (Bureau of Data Management & Strategy, 1994a). In addition, more individuals and their dependents receive services and financial benefits because of disability. There are 2.9 million disabled and 1.9 million dependents (an increase of 60% since 1972) that receive disability insurance benefits (Dittmar, 1989).

The incidence of specific disabilities is not reported or defined. Available statistics related to the ramifications of disability include: (a) days of confinement to bed due to disability; (b) incidence of acute conditions; and (c) percentage of population limited in activity (Bureau of Data Management & Strategy, 1994b; Centers for Disease Control & Prevention, 1994b).

Days of Confinement to Bed Due to Disability

The average number of days individuals of all ages spent confined to bed because of disability was over 3 days per person from 1983 to 1988. The

highest average was among individuals under the age of 5 and 75 years of age and older (ranged from 3 to 6 days) (Centers for Disease Control & Prevention, 1994b).

Incidence of Acute Conditions

Statistics regarding the acute conditions excluded those involving neither medical attention nor restrictions in activity. Among individuals of all ages, the incidence of acute conditions ranged from 181 to 190 episodes per 100 individuals from 1983 and 1988. The highest incidence was among those under the age of 15 (ranged from 280 to 303 episodes). The second highest incidence was among those between the ages of 15 to 44 (ranged from 162 to 181 episodes) (Centers for Disease Control & Prevention, 1994b). Some of these individuals require rehabilitation after the acute phase of their conditions.

Percentage of Individuals Limited in Activity

Limitations in activity were classified as those caused by chronic conditions. The degrees of limitations were: (a) total activity limitations; (b) minor activity limitations; and (c) major activity limitations. Among the general population, the percentage of individuals totally limited in activity has risen from 12.9% to 14.2%. The percentage of individuals with minor limitations has risen from 4.0% to 4.3%, and major activity limitations has risen from 5.2% to 5.5% (Centers for Disease Control & Prevention, 1994a).

Implications

Our aging population experience multiple chronic illnesses or disabilities which have many consequences. Physical sequelae may include skin breakdown, infections, aspiration, spasticity, pain, and falls. Psychosocial sequelae may include depression, noncompliance, and isolation (Gerhart,

Bergstrom, Charlifue, Menter, & Whiteneck, 1993; Gurwitz, Sanchez-Cross, Eckler, & Matulis, 1994; Siegler, Stineman, & Maislin, 1994). Psychosocial and physical sequelae are inter-related (Altman & Smith, 1992). In addition, the regression in self-care abilities of those with disabilities after initial rehabilitation becomes a sequelae in itself and highlights the need for continued intervention (Gibbon, 1994). The nurse can make a vital contribution to acute and community based rehabilitation because of the nurse's holistic approach to multiple health problems (Association of Rehabilitation Nurses, 1994).

Rehabilitation issues related to disabilities range from learning new skills to re-learning old skills. These skills include those required for physical and psychosocial functioning. Self-care is necessary for the continuance of life, health, development, and general well-being. All individuals have the potential to gain the necessary knowledge, skills, and motivation to perform self-care (Orem, 1991). If these skills are not fully incorporated into self-care behaviors during initial rehabilitation, individuals with disabilities must have further opportunities to learn these skills for their integration in the community (Blackwell, 1993).

Conceptual Framework

Self-Care: A General Definition

Self-care is an important aspect of health care. Over the centuries, the importance of its role in health care has varied (Johns, 1986). The definitions of self-care has varied over time, all with somewhat similar components. Self-care is self-initiated and sustained. It is performed to promote health and wellness. It encompasses prevention, treatment, rehabilitation, and interaction between the individual, family, and the health care systems (Johns, 1986).

Self-care is a process that empowers the individual to take responsibility for maintaining an optimal level of health and wellness. Warms (1987) states that health is wellness and is a dynamic rather than a static goal. Twaddle and Hessler (1977) view health as being three-dimensional, or as having three distinct but fluid components: (a) biological health; (b) psychological health; and (c) social health. Biological health is defined as a state of physical homeostasis. Psychological health refers to a state in which an individual has the ability to meet all obligations. Social health is defined as the capacity to optimize role performance. Self-care skills enable the individual to regulate and maintain optimal biological, psychological, and social functioning.

The concept of non-health, according to Twaddle and Hessler (1977), is comprised of the same components. Biological non-health is identified by signs/symptoms of illness. Psychological non-health is identified by the presence of depression and emotional problems. Social non-health is identified by a decrease in the capacity for role performance. The individual without the necessary self-care skills is unable to identify and perform the needed activities to improve, regulate, and maintain health and wellness in these areas.

Self-Care: Orem's Definition

The conceptual framework chosen for this study was Orem's General Theory of Nursing. Her theory is actually comprised of three related theories: (a) self-care theory; (b) self-care deficit theory; and (c) nursing systems theory (Orem, 1991). Her General Theory of Nursing is based upon the premise that an individual may need assistance at various times with the performance of self-care activities. When that need arises, the nurse becomes a self-care agent for the individual (Johnston, 1989; Orem, 1991). More specifically, if the

individual's and/or family's ability to perform self-care or dependent-care is equal to or greater than that of the nurse, the assistance of the nurse is not required. The only instances that require the assistance of the nurse occur when the individual's and/or family's abilities are less than those of the nurse (Orem, 1991).

Self-Care Theory

This theory consists of four concepts: (a) self-care; (b) self-care agency; (c) self-care requisites (or needs); and (d) therapeutic self-care demand. Orem defines self-care as learned, goal-oriented behaviors performed to regulate and integrate physical, psychological, and social functioning (1991). Self-care promotes the well-being of the individual. Dependent-care is self-care that is performed for an individual who is unable to do so, such as an infant, child, or dependent adult (Johnston, 1989; Orem, 1991). Disabled individuals may require partial or total care depending upon their abilities and needs (Orem, 1991).

Self-care. The concept of self-care presupposes that individuals have the potential to develop self-care and dependent-care skills and to maintain those skills. It assumes that the individual is able to determine what needs to be done to regulate functioning and development and then is actually able to perform the necessary activities (Orem, 1991).

Self-care is required to maintain an individual's psychophysiologic integrity. It is activities that are learned through an individual's interpersonal experiences. Self-care is, therefore, affected by those experiences, by cultural beliefs, and by maturation level. It is also affected by an individual's knowledge of health and illness (Orem, 1991).

During periods of illness, disease, injury, or other malfunctioning of an individual's integrity, additional self-care activities are required to improve health. Such malfunctioning may require an individual to contact health professionals. Seeking such contact is part of self-care, as is participating in the prescribed care. Adult individuals may opt not to perform certain self-care activities (Orem, 1991).

Self-care agency. Agency is defined as the ability of an individual to perform self-care activities. Adult individuals have both the right and the responsibility to perform these activities to maintain their integrity and the integrity of their dependents. When individuals are unable to perform self-care or dependent-care, assistance from health care professionals may be necessary to meet these self-care requisites (Orem, 1991).

Self-care requisites. These are defined as processes or technologies an individual requires to perform self-care activities. These requisites consist of three types: (a) universal (innate to all individuals); (b) developmental (resulting from maturation or adaptation); and (c) health deviation (resulting from a health problem or treatment) (Orem, 1991).

Universal requisites are common to all individuals. These include: (a) the intake of adequate oxygen; (b) the intake of adequate water; (c) the adequate intake of nutritients; (d) the management of elimination and excrements; (e) the balancing of activity and rest; (f) the balancing of solitude and social interaction; (g) the prevention of problems related to functioning, life, and well-being; and (h) the management of human functioning and development within existing limitations. All individuals require an environment that allows the

support of life processes, structural integrity, and functional integrity (Orem, 1991).

Developmental requisites vary with an individual's age. Orem (1991) describes these requisites as specialized versions of universal self-care requisites derived from developmental needs or disorders resulting from a condition or event. These requisites may include: (a) maturation needs in infancy, childhood, adulthood, and pregnancy; (b) education and social adaptation; and/or (c) health problems, disability, other losses or abrupt changes. Successful transition through the life cycle for an individual assumes that conditions are such that the developmental processes of each stage are promoted (Orem, 1991).

Health-deviation requisites include activities that focus on the prevention and treatment of interferences with an individual's structural and functional integrity and general well-being (Orem, 1991). These requisites pertain to individuals who are ill or injured, have one or more disabilities, and are under specific medical care. They also pertain to individuals who experience changes in behavior, mood, or interest in living. The feelings or beliefs experienced as a result of these changes may influence what actions are taken by the individual (Orem, 1991). These requisites include: (a) being aware of the consequences of health and social changes; (b) seeking appropriate medical and community assistance; (c) following through with medical recommendations; (d) managing side effects of medical care; and (e) accepting changes and their consequences and adjusting the self-concept (Orem, 1991).

Therapeutic self-care demand is defined as the specific activities required by an individual to meet the demands of self-care requisites (Johnston, 1989;

Orem, 1991). These activities are derived from specific purposes requiring deliberate courses of action. There are several factors that influence an individual's ability to participate in these activities. Developmental factors, environmental factors, and resources are just a few of these influences. When an individual is unable to perform the activities to meet self-care requisites, a deficit exists (Orem, 1991).

Self-Care Deficit Theory

The Self-Care Deficit theory is the cornerstone of Orem's General Theory of Nursing. A self-care deficit is said to exist when the ability of an individual to perform self-care is not enough to meet the self-care requisites. When this occurs, nursing intervention is required. The methods used by nursing consist of 5 categories: (a) providing care; (b) guiding through activities; (c) supporting; (d) providing a developmental environment; and (e) teaching (Johnston, 1989; Orem, 1991).

Providing care. The assumption is that the nurse has the abilities required to assist the individual. It also assumes that cooperation is offered on the part of the conscious individual. It also assumes that the nurse informs the individual of what needs to be done, what can be expected, and what needs to be reported to the nurse (Orem, 1991).

Guiding through activities. This is done by the nurse in situations in which the individual requires assistance in making choices, or requires supervision or direction. Guiding an individual requires that the nurse and individual are able to communicate with one another. This method of assistance also requires that the individual is motivated and has the ability to participate (Orem, 1991).

Supporting. This is done for an individual in situations in which the individual must deal with an unpleasant or painful event. The individual must be capable of participating once the support has been given. The support provided may be of a psychological, physical, emotional, verbal, or nonverbal nature. It also may be provided through assisting in securing needed resources (Orem, 1991).

Providing a developmental environment. This is described as providing the conditions necessary to ensure that an individual is able to participate in establishing and attaining goals. The nurse does not influence the individual's decisions unless the situation is life-threatening. The nurse creates conditions that permit an individual to make necessary changes in attitudes and self-concept, and to develop or maximize abilities to their potential (Orem, 1991).

Teaching. This is done for individuals who need instruction to gain knowledge and/or develop new skills. This requires that the individuals are aware of their knowledge deficits and are ready and willing to learn. It also requires that the nurse knows what needs to be taught and can provide the needed educational experiences (Orem, 1991).

Nursing Systems Theory

This theory describes a series of nursing actions taken to meet an individual's self-care requisites. It assumes that the nurse has the knowledge base and skills to perform the required actions. These actions are based upon the abilities and needs of the individual. There are 3 types of nursing actions: (a) wholly compensatory; (b) partly compensatory; and (c) supportive-educative (Orem, 1991).

Wholly compensatory. This is defined as actions required by nursing when an individual is totally dependent on others for provision of self-care needs. These actions are performed to accomplish therapeutic self-care for the individual, thereby compensating for the individual's impaired self-care agency, and provides support and protection for the individual (Orem, 1991). Wholly compensatory nursing actions apply to individuals who are in a coma, disabled individuals who cannot meet their physical needs, and disabled individuals who cannot make reasonable judgements and decisions about their self-care (Orem, 1991).

Partly compensatory. This is defined as actions taken jointly by nursing and the individual to meet self-care needs. The individual can meet some needs, but requires assistance for others. These actions compensate for the self-care limitations of the individual through the assistance of the nurse. The nurse or the individual may perform the majority of the self-care actions. Whether the nurse or individual performs this role may vary with time (Orem, 1991). Partly compensatory nursing actions apply to disabled individuals as they progress through initial and lifetime rehabilitation.

Supportive-educative. This is defined as actions taken by nursing to assist individuals who are able to meet self-care needs, but require assistance with such things as decision-making and obtaining resources. Nursing provides necessary support and guidance, as well as education and a developmental environment (Johnston, 1989; Orem, 1991). It is the only nursing system in which the therapeutic self-care needs of the individual are limited to decision-making, gaining knowledge and skills, and behavior control (Orem, 1991). Supportive-educative nursing actions apply to disabled individuals as

they move toward discharge from initial rehabilitation. Disabled individuals may also require periodic supportive-educative assistance throughout their lifetime rehabilitation process as their abilities and needs change.

Rehabilitation

Rehabilitation programs first developed after World War I to assist disabled veterans to secure employment. These programs focused on the physical aspects of rehabilitation. The psychosocial aspects of rehabilitation were not addressed until after World War II when veteran rehabilitation programs expanded to include community reintegration (Dittmar, 1989).

Rehabilitation is a process of adaptation that assists individuals toward health and independence within the limitations of their disabilities. Nurses are an important part of the rehabilitation process (Dittmar, 1989). Rehabilitation nurses assist those with disabilities to find ways to take responsibility for providing or managing their own self-care (Orem, 1991). The goals of rehabilitation focus on self-care. The rehabilitation process strives to restore and maintain optimal function in self-care and social roles. To accomplish this, the rehabilitation process focuses on re-learning old skills and developing new skills.

Individuals with disabilities can maximize their potential level of health through education, support, and appropriate resources (Warms, 1987). Individuals with disabilities can be taught to supervise and direct the aspects of their personal care that they are not able to perform independently. Individuals with disabilities can also achieve their optimum level of self-care independence within their limitations as long as they are included in decisions regarding the rehabilitation process. Failure to participate in the decision-making process is a hindrance to their motivation to achieve that independence (Dittmar, 1989).

Rehabilitation takes place in many settings. Initial rehabilitation centers can be found in acute hospitals, free-standing facilities, and in skilled nursing or sub-acute facilities. Further rehabilitation opportunities can be found in community transitional living programs (Castree & Barnes, 1993; Kochersberger, Hielema, & Westlund, 1994; Payne, 1993).

The role of nursing is an integral component of the rehabilitation team. The rehabilitation nurse functions as caregiver, coordinator, educator, leader, collaborator, facilitator, liaison, consultant, discharge planner, and researcher (Dittmar, 1989). The nurse provides direct care, creates a therapeutic environment, and facilitates the individual in the integration of skills. The nurse communicates and works with the team to attain common goals through a cooperative environment. The rehabilitation nurse is a resource to the individual, family, and team. The nurse assists in the adaptation, problem-solving, and follow-through of skills for timely goal attainment. The nurse responds to the needs of the individual and family while motivating their independence. The rehabilitation nurse orchestrates the discharge process and makes referrals to enhance community re-integration. The rehabilitation nurse is a vital link to community-based care, and as case manager, facilitates a continuum of care in the rehabilitation process (Dittmar, 1989).

Case Management

Case management is a comprehensive, coordinated continuum of care that maximizes self-care abilities and facilitates access to resources. It promotes the use of appropriate and cost effective resources (Malloy, 1994; Zander, 1988). Case management reduces fragmentation of care and services and improves quality of life. It is accomplished through interaction, assessment,

planning, implementation, and evaluation (American Nurse's Association, 1988; Biller, 1992; Connolly, 1992; Conti, 1989).

Case management focuses on clients who are at high risk of complications due to their complex health care needs. These clients include the frail elderly, chronically ill, developmentally disabled, physically disabled, and mentally disabled (Biller, 1992). Case management empowers the individual and family to become agents of self-care by placing the responsibility for health upon them (Holzemer, 1992).

Most health care professionals have at some time performed case management. Physicians, nurses, physical therapists, occupational therapists, psychologists, and social workers have all functioned as case managers (Connolly, 1992; Dufresne, 1991; Holzemer, 1992). The roles of rehabilitation team members overlap in many areas due to the collaborative nature of rehabilitation. The nurse functions as caregiver, coordinator, educator, leader, collaborator, facilitator, liaison, consultant, discharge planner, and researcher (Dittmar, 1989). Nurses, because of their knowledge and expertise, can provide many of the services of other disciplines and have a broader overview. Nurses have a theoretical foundation in biological and social sciences, health maintenance, disease processes, and medications that other disciplines do not generally possess (Dittmar, 1989). Certification validates competence and specialized knowledge in a speciality nursing practice. Nurses with rehabilitation certification provide a quality of nursing service that is further enhanced by their certification (Holzemer, 1992).

Summary

The numbers of persons with disabilities are growing. The percentages of individuals experiencing total limitations, major limitations, and minor limitations in their activities due to disability are also growing. These limitations result in various limitations in self-care abilities. Health problems and psychosocial difficulties are common sequelae that can be exacerbated by a regression in self-care abilities after initial rehabilitation. Health is synonymous with wellness and is fluid rather than static. Health is the process of maximizing self-care potential at any phase in the lifespan. Disability does not result in a different definition of health and wellness. Assisting individuals with disabilities to maximize their self-care potential can be accomplished using Orem's General Theory of Nursing.

Orem's General Theory of Nursing is comprised of 3 related theories. These theories elaborate on the nursing metaparadigm as it relates to self-care. The concepts of person, environment, health, and nursing are interwoven in her assumptions regarding self-care, self-care deficit, and nursing systems.

Self-care is self-initiated and sustained. Its goal is to promote health and wellness. It includes prevention, treatment, and rehabilitation. Self-care involves the interaction between individuals, families, and members of the health care system. The degree to which these partners participate depends upon their abilities and needs. Orem's General Theory of Nursing provides a framework for the provision of self-care in all of its variations.

Rehabilitation is a dynamic, lifelong process. It encompasses the dimensions of biological, psychological, and social health. The process of rehabilitation is a joint venture between individuals, families, rehabilitation

professionals, and society. Individuals with disabilities are not exempt from the responsibilities of self-care. They have the right to have opportunities to increase their level of independence in self-care during the rehabilitation process.

As a rehabilitation team member, the nurse works with individuals and families to identify actual and potential self-care needs. The certified rehabilitation nurse has the knowledge and expertise to teach these individuals how to take responsibility for their biological, psychological, and social health and to assist with environmental and societal re-integration. After initial rehabilitation, community environments offer continued opportunities for individuals with disabilities and their families to maximize their self-care potential. The certified rehabilitation nurse as case manager, can make valuable contributions to the continued rehabilitation of these individuals.

Chapter 3

RESEARCH METHODOLOGY

The purpose of this study was to compare the self care and referral needs of clients idetified before and after the implementation of case management by a certified rehabilitation nurse. To describe the differences, the following research questions were addressed:

1. Did the early identification of appropriate clients by the certified rehabilitation nurse decrease entry time into the residential training program?
2. When were the self-care and referral needs identified?
3. What types of self-care and referral needs were identified in the application screening process by the certified rehabilitation nurse case manager?

Design

A descriptive, retrospective chart audit was used to describe the self-care and referral needs identified for two groups of individuals with disabilities accepted into a community independent living center's residential training program. One group received case management by a certified rehabilitation nurse; the other group received care by another health professional prior to the implementation of nurse case management. Re-analysis and interpretation of data obtained from client records lends itself to a descriptive, secondary analysis survey design (Oyster, Hanten, & Llorens, 1987). This convenience sample was selected because there were no similar residential training programs at other community independent living centers.

Sample/Setting

The subjects were a sample of convenience. They were clients accepted into the residential training program of a northern California independent living

center from July, 1988 to January, 1993. One half of the subjects in the sample were comprised of all clients accepted into the program who received case management by a certified rehabilitation nurse. The other half of the sample were comprised of an equal number of clients accepted into the program in the period immediately prior to implementation of case management by a certified rehabilitation nurse.

Human Subjects

Approval for secondary analysis of the records of clients in its residential training program was received from the director of community services at the independent living center (Appendix A). Approval for the study was obtained from the San Jose State University Institutional Review Board, Human Subjects (Appendix B). Confidentiality was strictly observed by assigning a number to each survey and keeping the information in a separate locked file. A separate list of numbers and subject names was kept by the director of community services and subsequently destroyed upon the completion of the data analysis.

Instrument for Data Collection

The Case Management Survey (Appendix C) was developed by the investigator to collect demographic data, time for entry into and completion of the program, and to identify client needs. The Omaha Visiting Nurses' Association's Classification Scheme was utilized to determine types of self-care and referral needs. These domains of client needs include: (a) environmental problems; (b) psychosocial problems; (c) physiological problems; and (d) health behavioral problems (Martin & Scheet, 1992). Environmental problems are those external factors that affect the health of the client. Psychosocial problems are those related to behavior, development, relationship, and communication.

Physiological problems are those related to functional processes of life maintenance. Health behavior problems are those related to activities that promote recovery, promote rehabilitation, and maintain wellness (Martin & Scheet, 1992). The descriptions of these domains were used by the investigator to develop an individualized list of problems applicable to clients in this specific community setting because there was no such instrument available as part of the Omaha Classification Scheme. The Case Management Survey was not tested for validity and reliability because of the paucity of subjects for such testing.

Procedure for Data Collection

The investigator, a certified rehabilitation registered nurse, collected data from the files of 14 clients who were accepted into the residential training program from 1988 to 1992. As part of the intake process of the independent living center, the clients signed informed consents regarding the collection of data from their files for grant research. The independent living center requested the results of this study for such purposes. The files of these clients were reviewed by the certified rehabilitation registered nurse investigator between June, 1993 and April, 1994.

Analysis

Self-care and referral needs were described as being identified: (a) before entry or acceptance into the residential training program; or (b) after entry or acceptance. Self-care and referral needs were identified for those clients who received case management by a certified rehabilitation nurse and for those clients who received case management by another health professional. The two groups of subjects were compared.

The research design for secondary chart audit using the Case Management Survey lends itself to analysis by various descriptive statistical techniques (Oyster et al., 1987). The investigator used frequency distributions and cross-classification (or cross-tabulation) tables to analyze the data. The self-care and referral needs addressed by the research questions were cross-tabulated by whether or not case management was provided. These cross-tabulations describe the frequency of the data for both groups of subjects in the sample. The results of the analysis and interpretation of the data are discussed in the following chapter.

Limitations

This study has several limitations. Statistical analysis of the differences between the group with case management by a certified rehabilitation nurse and the group without case management by a certified rehabilitation nurse is not possible because of the small sample size. Generalization of the descriptive results is limited by the small size of the sample and the lack of similar residential training programs for comparison. The lack of similar independent living programs and the lack of statistics regarding the incidence of specific disabilities does not permit assumptions regarding the representative nature of the sample.

Summary

The charts of clients accepted into a northern California independent living center's residential training program were available for this study. A descriptive secondary analysis, through a chart audit, was used to obtain a list of the self-care and referral needs identified and the time period (before or after entry or acceptance into the training program) during which they were identified. Approval was obtained from the regulatory boards and confidentiality was strictly

observed. The certified rehabilitation registered nurse collected the data through chart audit using the Case Management Survey. The results of the study were discriptively analyzed through the use of frequency distributions, measures of mean, and cross-tabulations and are presented in the following chapter.

Chapter 4

ANALYSIS AND INTERPRETATION OF THE DATA

This chapter reports the results of the survey and the analysis of the data collected through audit of the charts of two groups of individuals with disabilities. These individuals were accepted into a community independent living center's residential training program. One group received case management by a certified rehabilitation nurse. The other group was admitted prior to the implementation of the nurse case management and received case management by another health professional. The differences in the two groups were compared regarding identified self-care and referral needs.

Nurse Case Management Program

The early identification of appropriate clients for the residential training program was one of the primary functions of the certified rehabilitation nurse case manager. Obtaining the needed services and resources for clients regardless of their appropriateness for the training program was also important. The certified rehabilitation nurse case manager reviewed the application process to determine the types of information obtained regarding the clients to determine where changes and/or additional information were needed. The certified rehabilitation nurse case manager made several changes in data collection and application screening processes. These changes were based upon the certified rehabilitation nurse case manager's knowledge base regarding physiological and health behavior issues. The application form and questionnaire were revised to elicit more detailed, specific information from the clients. General, open-ended questions were avoided and replaced with multiple choice responses. Clients were also provided with space for elaboration.

Letters of recommendation from health professionals acquainted with the applicants were revised to include specific instructions for writing the letters. The instructions listed the issues that were to be addressed in the letters of recommendation. The general request for medical records, originally intended to verify disability, was altered for the application process to include examples of specific types of information needed to facilitate the screening process.

The team interview was also restructured. Questions were included to verify or expand upon the information obtained in the application and questionnaire. Two additional interviews were added to the application process. These interviews were conducted by the certified rehabilitation nurse case manager. They were structured around biophysical, self-care, and health behavior issues such as bladder management, bowel management, and skin care management.

Clients were required to have a psychological evaluation by a local private neuropsychologist in addition to meeting with the program's counselors to address psychosocial issues for a minimum period of 6 weeks. In addition, the families were encouraged to participate in the counseling.

Description of the Sample

The total sample was comprised of 9 males and 5 females. The group with case management by a certified rehabilitation nurse consisted of 4 males and 3 females, ages 22 to 26 years. The group with case management by another health professional included 5 males and 2 females, ages 17 to 21 years. Five out of 7 subjects in the group with case management by a certified

rehabilitation nurse were white, 1 was black, and 1 was Asian. Four out of 7 subjects in the group with case management by another health professional were Hispanic and 3 were white.

In the group that received case management by a certified rehabilitation nurse, 5 out of 7 were supported by Supplemental Security Income and 2 were supported by private funds. All subjects in the group with case management by another health professional were supported by Supplemental Security Income.

Table 1
Demographics of Subjects According to Type of Case Management (Allied Health Prof [AHP] or Nurse)
(N=14)

Demographics		AHP	Nurse
Age	17 to 21 years	3	7
	22 to 26 years	3	0
	42+ years	1	0
Gender	Male	4	5
	Female	3	2
Race	Black	1	0
	White	5	3
	Asian	1	0
	Hispanic	0	4
Income Source	Suppl Sec Inc	5	7
	Private	2	0
Primary Disability	Neurological	3	5
	Traum Brain Inj	2	0
	Congenital Abn	2	2
	Learning Disab	1	0

The group of 7 clients with case management by a certified rehabilitation nurse included 3 clients with neurological primary disabilities, 2 subjects with traumatic brain injuries, 1 with a congenital abnormality, and 1 with a developmental disability. The group of 7 subjects with case management by

another health professional included 5 clients with neurological primary disabilities and 2 subjects with congenital abnormalities. Seven of the 14 subjects in the total sample did not have any secondary disabilities. These demographics are summarized in Table 1.

Research Question One

Did the early identification of appropriate clients by the certified rehabilitation nurse decrease entry time into the residential training program?

The range of entry time for both groups of subjects was 101 to 150 days. Entry time was the length of time, in days, from mailing of the application packet to acceptance into the program. The entry time in the group that received case management by the certified rehabilitation nurse was not significantly different from that of the group that received case management by another health professional. Four out of 7 subjects with case management by a certified rehabilitation nurse had an entry time that ranged between 101 to 150 days. The other 3 had an entry time of between 1-100 days. Five out of 7 subjects with case management by another health professional had an entry time between 101 to 150 days. The other 2 had an entry time of between 1-100 days.

Table 2
Comparison of Entry Time and Program Completion By Type of Case Management (Allied Health Prof [AHP] or Nurse)
(N=14)

Demographics		AHP	Nurse
Entry Time	1-100 days	4	2
	101-150 days	3	5
Completed Program	Yes	5	4
	No	2	3

Nine out of 14 subjects in the sample completed the residential training program. Five out of 7 subjects with case management by a certified rehabilitation nurse and 4 out of 7 of subjects with case management by another health professional completed the program. Entry times and program completion are summarized in Table 2.

Research Question Two

When were self-care and referral needs identified?

In the group of subjects with case management by a certified rehabilitation nurse 46 self-care needs were identified before entry compared to 20 self-care needs for the group of subjects with case management by another health professional. Eight self-care needs were identified after entry for the subjects with case management by a certified rehabilitation nurse compared to 30 for the subjects with case management by another health professional.

Specifically, 7 environmental self-care needs were identified prior to entry for the group that received case management by the certified rehabilitation nurse. The group that received case management by another health professional had 6 needs identified prior to entry and had 2 needs identified after entry.

Three psychosocial needs were identified before entry in the group that received case management by the certified rehabilitation nurse. There were none identified before entry in the group that received case management by another health professional.

Nineteen physiological needs were identified before entry for the group with case management by the certified rehabilitation nurse compared to 10 for the group with case management by another health professional. One of these

needs was identified after entry for the group with case management by the rehabilitation nurse compared to 11 for the group with case management by another health professional.

Eighteen health behavior needs were identified before entry for the group with case management by the certified rehabilitation nurse compared to 3 for the group with case management by another health professional. Six were identified after entry for the group with case management by the certified rehabilitation nurse compared to 12 for the group with case management by another health professional. Comparisons of the two groups of subjects are summarized in Figure 1 and Figure 2.

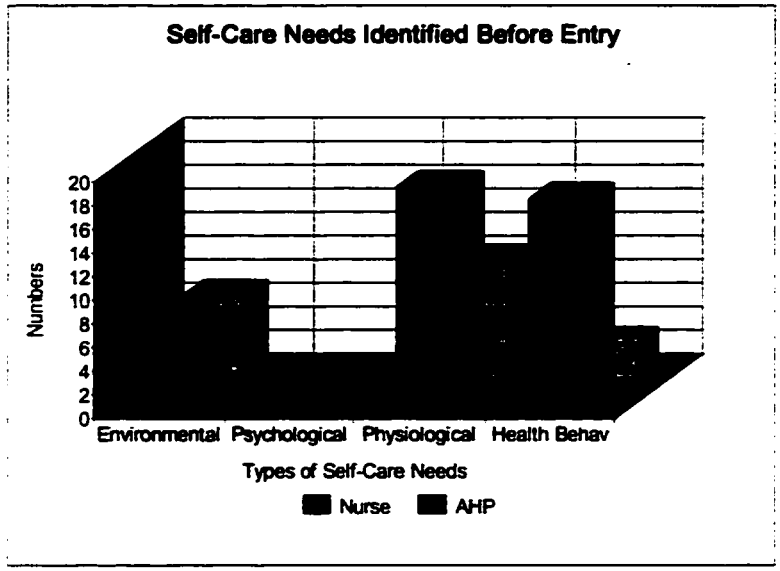

Figure 1. Comparison of Self-Care Needs Before Entry into Residential Training Program

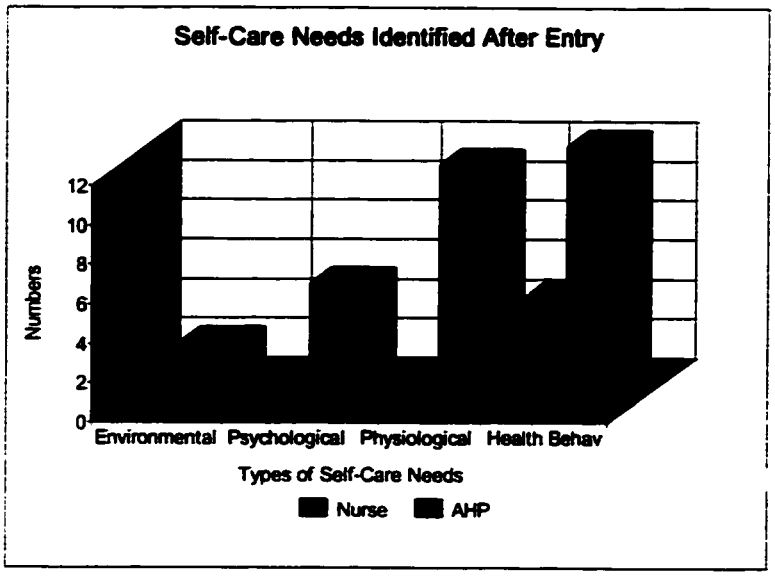

Figure 2. Comparison of Self-Care Needs After Entry into Residential Training Program

Referral Needs

In addition to the identification of self-care needs, the role of the certified rehabilitation nurse case manager included the identification of referral needs. Previously, referrals occurred after entry into the training program. The certified rehabilitation nurse case manager focused on the early identification of these referral needs before entry into the residential training program.

A greater number of these psychosocial referral needs were identified by the certified rehabilitation nurse case manager before entry into the residential training program. Referral needs for both groups of subjects fell into the category of psychosocial needs. Psychosocial referral needs identified by the certified rehabilitation nurse case manager included those of community resources and behaviorial issues. The behaviorial issues identified included those of behavior, role conflict, interpersonal conflict, grief, and depression. An initial 6-week period of counseling was required for all clients to assist with their

transition into the program. The identified behavioral referral needs resulted in requirements for more extensive counseling. The early identification of these needs enabled the certified rehabilitation nurse case manager to make necessary referrals for those applicants who were not appropriate for the residential training program.

Specifically, 15 referral needs were identified before entry for subjects with case management by a certified rehabilitation nurse compared to none for subjects with case management by another health professional. In addition, 3 referral needs were identified after entry for subjects with case management by a certified rehabilitation nurse compared to 11 for subjects with case management by another health professional.

Research Question Three

What types of self-care and referral needs were identified in the application screening process by the certified rehabilitation nurse case manager?

Self-Care Needs

Self-care needs were not clearly identified during the application process prior to case management by the certified rehabilitation nurse. The application form, questionnaire, request for medical records, and team interview questions were revised by the certified rehabilitation nurse case manager. Self-care needs included environmental, psychosocial, physiological, and health behavioral issues.

A greater number of self-care needs were identified before entry into the residential training program by the certified rehabilitation nurse case manager . Environmental needs identified included income and safety issues. Income issues were those of budgeting, and checking and savings account

management. Safety issues were those of first aid, emergencies, household risk, and personal risk management. Issues of judgment (e.g., the ability to make sound and reasonable decisions) were included with those of safety.

Psychosocial self-care needs identified by the certified rehabilitation nurse case manager included issues of cognition. These included memory, attention, concentration, perception, problem-solving, and sequencing.

Physiological needs identified included speech, neuromusculoskeletal function, reproductive function, bowel and bladder management, and skin care management. Neuromusculoskeletal function included the ability to perform activities of daily living and home management. Reproductive function included the ability to manage menstruation and sexual function. Bowel, bladder, and skin care management included the ability to perform activities necessary to maintain health in those areas.

Health behavioral issues included nutrition, activity, hygiene, substance misuse, ability to seek health care, ability to use and maintain equipment, and ability to comply with prescribed treatment plans, medication regimes, and dietary regimes. It was important to identify these self-care needs and to determine for each client whether the residential training program or referral to another agency was appropriate. The self-care needs identified for both groups of subjects in the sample are summarized in Table 3.

Referral Needs

Community resource referrals included intra-agency services as well as inter-agency services. Making referrals included providing necessary teaching regarding available resources and facilitating access to services.

Table 3
Comparison of Self-Care Needs Identified Before and After Entry into Residential Training Program By Type of Case Management Allied Health Prof [AHP] or Nurse) (N = 103)

		Identified Before Entry		Identified After Entry	
Self-Care Needs	Issues	Nurse	AHP	Nurse	AHP
Environmental	Income	3	4	0	2
	Safety	3	3	0	0
Psychological	Cognition	3	0	1	5
Physiological	Speech	1	1	0	0
	Function	7	7	0	2
	Reproductive	0	0	1	1
	Bowel	3	2	0	1
	Bladder	4	0	0	5
	Skin	4	0	0	2
Health Behavior	Nutrition	1	0	0	3
	Activity	2	1	0	1
	Hygiene	3	0	0	1
	Substance Misuse	1	1	1	1
	Health Care	6	1	0	1
	Treatment Plan	1	0	2	3
	Medications	1	0	1	1
	Dietary	1	0	2	0
	Equipment	2	0	0	1

Referral needs identified behavioral issues including management of anger, passive-aggression, manipulation, compulsivity problems, socialization, and ineffective coping. Role and interpersonal conflict issues included personal role changes, interpersonal communication difficulties, and family role changes. Grief and depression issues included unresolved issues related to acquired disability, loss of independence, dependency, and self-esteem. These referral needs are summarized for both groups of subjects in Table 4.

Table 4
Comparison of Referral Needs Identified Before and After Entry into Residential Training Program By Type of Case Management (Allied Health Prof [AHP] or Nurse) (N = 39)

Referral Needs	Issues	Identified Before Entry		Identified After Entry	
		Nurse	AHP	Nurse	AHP
Psychological	Resources	4	0	1	3
	Behavior	3	0	1	2
	Role Conflict	5	0	3	4
	Depression	7	0	2	4

Summary

Environmental, psychosocial, physiological, and health behavior self-care needs were identified for the subjects who received case management by a certified rehabilitation nurse and for the subjects who received case management by another health professional. These self-care needs were categorized according to whether they were identified before entry or after entry for both groups of subjects. Psychosocial referral needs also were identified for the subjects with case management by a certified rehabilitation nurse and for the subjects with case management by another health professional. These referral needs were categorized in the same manner.

The mean entry time, or length of time it took for clients to complete the screening process and be accepted into the residential training program, was the same for both groups of subjects. However, the certified rehabilitation nurse case manager identified self-care and referral needs earlier in the application process. Self-care and referral needs were identified later in the residential training process more frequently prior to case management by the certified rehabilitation nurse.

Chapter Five

DISCUSSION OF FINDINGS

The total sample in this study was comprised of individuals accepted into a community independent living center's residential training program. One group was accepted into the program before the implementation of case management by the certified rehabilitation nurse. The other group was accepted into the program after implementation of case management by the certified rehabilitation nurse. The group with case management by the certified rehabilitation nurse was comprised of 4 males and 3 females. The group with case management by another health professional was comprised of 5 males and 2 females. The mean range of ages for the group with case management by the certified rehabilitation nurse was slightly older (22 to 26 years) than that of the group with case management by another health professional (17 to 21 years). The most common type of primary disability in both groups was of a neurological nature.

The application and screening process was revised by the certified rehabilitation nurse case manager to facilitate the early identification of clients appropriate for the residential training program. These revisions were made to facilitate collection of more specific information for that purpose. The revisions developed by the certified rehabilitation nurse case manager were based upon an extensive knowledge base regarding physiological and health behavioral issues and included tools to identify specifics of personal care, self-care practices, health care practices, and health care-seeking behaviors.

Research Question One

Did the early identification of clients with the potential for successful rehabilitation decrease entry time into the residential training program?

The length of time in days, or entry time, it took from mailing of application packets to acceptance of clients into the program was found not to be an appropriate indicator of whether or not early identification occured. Early identification of appropriate clients assumes that all things are equal. It assumes that the certified rehabilitation nurse case manager is able to review data, screen clients, and maintain client contact in a timely manner. It assumes that the client is able to complete required forms and supply needed information in a timely manner. Several clients in both groups required more frequent contact. Several n the group that received case management by the certified rehabilitation nurse did not return their forms and other information in a timely manner in spite of more frequent contact. For these clients, entry times were delayed.

The small size of the convenience sample also makes it difficult to make generalizations about the comparison of entry times for the two groups. Therefore, the effectiveness of the certified rehabilitation nurse case manager's role in the early identification of appropriate clients was not explained through the comparison of the entry times for the two groups of subjects.

Research Question Two

When were self-care and referral needs identified?

It was important to identify self-care needs early in the application and screening process to facilitate the identification of clients appropriate for the training program. Early identification of referral needs was important to facilitate appropriate referrals to outside agencies when necessary.

Self-Care Needs

There were a greater number of self-care needs identified before entry in the group that received case management by the certified rehabilitation nurse.

There was a total of 104 self-care needs identified for the total sample in this study. Forty-six (44%) were identified before entry in the group that received case management by the certified rehabilitation nurse compared to 20 (19%) identified before entry in the group that received case management by another health professional. Only 8 (8%) of these self-care needs were identified after entry in the group that received case management by the certified rehabilitation nurse case manager compared to 30 (29%) identified after entry in the group that received case management by another health professional.

Referral Needs

There were a total of 39 referral needs identified for the total sample in this study. Nineteen (49%) were identified before entry in the group that received case management by the certified rehabilitation nurse compared to none (0%) identified before entry in the group that received case management by another health professional. Only 7 (18%) of these referral needs were identified after entry in the group that received case management by the certified rehabilitation nurse compared to 13 (33%) identified after entry in the group that received case management by another health professional.

Research Question Three

What types of self-care and referral needs were identified in the application screening process by the certified rehabilitation nurse case manager?

Self-Care Needs

The application form, questionnaire, request for medical records, and interview questions were revised by the certified rehabilitaiton nurse case manager to assist in the collection of information regarding the self-care needs of the clients. The clients were asked to provide more specific details regarding

their personal care, self-care practices, health care practices, and health care-seeking behaviors.

There was a greater number of self-care needs identified before entry into the residential training program by the certified rehabilitation nurse case manager. Forty-four percent more self-care needs were identified before entry and 27% fewer self-care needs were identified after entry after the changes were made in the application screening process.

The role of the certified rehabilitation nurse case manager was most demonstrated in the identification of health behavior self-care needs. Sixty-three percent more health behavior self-care needs were identified in the group that received case management by the certified rehabilitation nurse than for the group that received case management by another health professional. However, fewer environmental (33%), psychosocial (40%), and physiological (5%) self-care needs were identified for the group that recieved case management by the certified rehabilitation nurse than for the group that received case management by another health professional. The emphasis of the revisions made by the certified rehabilitation nurse case manager to the application form, questionnaire, and interview questions primarily focused on health behaviors. This may account for these differences.

Referral Needs

The changes made in the application screening process by the certified rehabilitation nurse case manager also assisted in the collection of information about the referral needs of the clients. All of the referral needs identified for the total sample were of a psychosocial nature and included resources, behavior, role conflict, and depression. While not all of these needs were identified before

entry for the group with case management by a certified rehabilitation nurse, no referral needs were identified before entry for the group with case management by another health professional. Twenty-seven percent fewer referral needs were identified after entry for the group with case management by a rehabilitation nurse than for the group with case management by another health professional.

Specifically, 54% fewer total psychosocial referral needs were identified after entry in the group that received case management by the certified rehabilitation nurse than for the group that received case management by another health professional. There were fewer resource (67%), behavior (50%), role conflict (25%), and depression (50%) referral needs identified after entry for the group that received case management by the certified rehabilitation nurse than for the group that received case management by another health professional. Implementation of case managment by a certified rehabilitation nurse and changes made in the application screening process by the certified rehabilitation nurse case manager facilitated the early identification of these referral needs.

Research Questions Related to Conceptual Framework

Orem's General Theory of Nursing, in particular her self-care deficit theory, provided the framework for this study. Self-care consists of learned behaviors that empower individuals to achieve well-being (Johnston, 1989; Orem, 1991). Individuals with disabilities have a right to that empowerment. They can be taught to supervise and direct the aspects of their self-care in which they are not independent. The certified rehabilitation nurse can be a key health care professional to assist in this process (Dittmar, 1989). The certified rehabilitation nurse assists individuals to integrate self-care skills into self-care

behaviors, to become active participants in their lifetime rehabilitation, and to achieve well-being (Dittmar, 1989; Johnston, 1989; Orem, 1985).

This study describes the role of the certified rehabilitation nurse, as case manager, in this process and identifies areas of need for individuals with disabilities that must be addressed early in the rehabilitation process. The rehabilitation nurse utilizes an extensive knowledge base regarding disability health care to provide the education, support, and access to resources needed for these individuals to integrate new self-care skills into their self-care behaviors and to maximize their self-care agency potential.

Limitations

Descriptive research is limited in its examination of data to that of frequency distributions and related statistical measures. Secondary analysis is limited because it is re-interpretation of another individual's data that is used for a different purpose (Oyster et al., 1987). In addition, the changes made in the application screening process by the certified rehabilitation nurse case manager increased the potential amount of information available for the group that received case management by the certified rehabilitation nurse. However, the changes made to the application screening process primarily focused on physiological and health behavioral issues and was limited in its focus on other issues. More specific details regarding environmental and psychosocial issues would be valuable.

External validity is limited in this study by several factors. The small sample size of 14 and geographical area of only northern California affect major limitations on any generalizations that can be made from this study. The lack of similar residential training programs and the limited number of clients available

for this study also limit any generalizations. Subjects were from only 1 community independent living center and generalizations to other centers are therefore limited.

Conclusions and Recommendations

This study indicates that the certified rehabilitation nurse, as case manager, was able to identify a greater number of self-care and referral needs earlier in the application screening process. However, due to the small number of subjects, generalizations cannot be made regarding any potential implications. This study provides a foundation for further study. Studies of future clients of residential training programs will be needed to provide additional data. The screening process should be revised to address in greater detail environmental, and psychosocial self-care needs. The results of future studies would provide valuable information for other centers interested in developing similar community residential training programs. Ultimately, a larger population drawn from these other centers will be needed to provide the additional data required for appropriate generalizations.

Recommendations for Nursing

Nursing plays a key role in the rehabilitation of individuals with disabilities. The certified rehabilitation nurse provides valuable training, education, and support in the acute and post-acute settings. In today's health care environment, lengths of stay are continuing to decrease in these settings. As a result, the community continues to grow as a valuable setting for lifetime rehabilitation. The independent living center and other community based settings provide opportunities for rehabilitation nurses to continue their key role in this process.

Their role in the community is further enhanced by their certification in rehabilitation nursing.

Nurses can make important contributions to community-based care and to future changes in rehabilitation health care because of their extensive knowledge regarding rehabilitation. The large numbers of nurses can work together to make a difference in the direction of those changes and in the lives of individuals affected by disabilities.

Summary

The certified rehabilitation nurse plays a key role in the earlier identification of self-care and referral needs for disabled individuals in the community setting . Once needs are identified, the certified rehabilitation nurse case manager assists in the integration process of self-care skills into self-care behaviors. The breadth of practice of the rehabilitation nurse places the certified rehabilitation nurse in a critical position to provide leadership to the rehabilitation team by way of case management. In this way, individuals with disabilities are empowered and motivated to achieve their maximum potential well-being that is both their right and responsibility as members of the communities in which they live.

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APPENDIX A

Consent from the Independent Living Center

December 9, 1991

Graduate Studies & Human Subjects Review Board
San Jose State University
One Washington Square
San Jose, CA 95192-0057

Dear Sir or Madam:

The _____ (____) gives consent to Ms. Karen Blair for working with this facility and its clients for her case management research and thesis project. Since March, 1991, Ms. Blair has been interning in the role of Residential Training Program Case Management Officer, utilizing her skills as a registered nurse and clinical nurse specialist. Ms. Blair has provided valuable health and safety education and case management services over the past nine months. It is our desire that these new services become an integral component of the Residential Training Program on a continual basis.

Ms. Blair will be allowed use of the client files database statistics for secondary analysis for her research project. We greatly appreciate Ms. Blair conducting this project and we request that she provide us with a copy of her findings.

Sincerely,

_____
Director, Community Services Department

APPENDIX B

Consent from the San Jose State Institutional Review Board

Request for Exemption from Human Subjects Review

Name: Karen B. Blair **Department:** Nursing
Phone Number: Work 408- - **During** day **Home** 408- - **During** Msg/eves
Address: , San Jose, CA 95126-2610
Campus Affiliation: ___ **Faculty** XX **Student** ___ **Staff** ___ **Non-SJSU (contact)** _____
If SJSU Student, Name and Department of Faculty Advisor: , Dept of Nursing
Signature of Responsible Faculty Member Named Above: _____
Title of Proposed Project: Community Case Management by a Certified Rehabilitation Nurse

Abstract: Case management has become a growing interest in healthcare today. While there is substantial information in the literature regarding the acute healthcare setting, third party payor systems, and the many disciplines involved, there is little concerning the community setting except for psychiatric settings. This study will examine case management in an independent living center. It will focus on its residential training program. This study will examine the impact of this case management as provided by a certified rehabilitation nurse through descriptions of the self-care and referral needs identified before and after implementation of nurse case management.

Description of Subjects: The subjects in this proposed study are disabled clients of an independent living center who have applied for its residential training program. The breakdown of these disabilities, in the past six years, has been 7.5% physical (e.g. amputees, Crohn's disease, etc.), 20.9% developmental (e.g. cerebral palsy), and 71.6% neurological (e.g. traumatic brain injury, cerebral accidents, and spinal cord injury).

Description of Data Collection Procedures: During each client's application process, records are kept regarding the date of mailing of application packet, date of receipt of application & questionnaire, date of receipt of medical records & letters of recommendation. Medical issues will be identified through chart review of those documents. Evaluations of independent living skills, psychological issues, and cognitive issues will be evaluated through chart review. Identification of problems will be documented and additional problems not identified will be noted through chart review. Date of acceptance into the training program will be noted as well. Anonymity of clients will be maintained by assignment of a case number. The independent living center will keep a list of client names and case numbers assigned until the end of the study at which time the list will be destroyed.

Category of Exempt Research (see reverse): (D) Research involving the collection of or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or no individual identification can be made.

Is this Project:

Externally Funded:	_____ **YES**	XX **NO**
A Sabbatical Leave Proposal:	_____ **YES**	XX **NO**
A Master's Thesis or Project:	XX **YES**	_____ **NO**

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Human Subjects-Institutional Review Board Action

XX **Request Approved** ___ **More Information Required** ___ **HS-IRB Review Required**
Additional Information Requested or Rational for Requiring Review: _____

Reviewer's Signature: _____ **Date:** _____
TO: HS-IRB Reviewer: _____ **Date:** _____

APPENDIX C

Case Management Survey

CASE MANAGEMENT SURVEY

IDENTIFICATION NUMBER ( ) ( ) 1.1-2.1/

GENDER Female.....1 Male.....2 3.1/

AGE in Years 17-21.....1 22-26.....2 27-31.....3 32-36.....4
37-41.....5 42+.....6 4.1/

ETHNICITY White.....1 Hispanic.....2 Black.....3 Asian.....4
Other.....5 5.1/

PRIMARY Disability
Acquired Neurological.....1
Acquired Musculoskeletal.....2
Acquired Traumatic Brain Injury.....3
Congenital.....4 Developmental.....5
Other.....6 6.1/

SECONDARY Disability
Acquired Neurological.....1
Acquired Musculoskeletal.....2
Acquired Traumatic Brain Injury.....3
Congenital.....4 Developmental.....5
Other.....6 7.1/

Case MANAGED Client Yes.....1 No.....2 8.1/

ENTRY Time in Days 1-50.....1 51-100.....2 101-150.....3
151-200.....4 201-250.....5 251-300.....6
301-350.....7 351-400.....8 9.1/

COMPLETED Program Yes.....1 No.....2 10.1/

SELF-CARE Needs Identified (1)

ENVIRONMENTAL (1) Before.....1 After.....2
Income ( ) 1.2/
Safety ( ) 2.2/

PSYCHOSOCIAL (1) Before.....1 After.....2
Memory/Attnetion/Concentration/Perception ( ) 3.2/

PHYSIOLOGICAL (1) Before.....1 After.....2
Speech and Language ( ) 4.2/
Neuro-Musculo-Skeletal Function ( ) 5.2/
Reproductive Function ( ) 6.2/
Bowel Management ( ) 7.2/
Bladder Management ( ) 8.2/
Skin Care Management ( ) 9.2/

HEALTH BEHAVIOR (1)
Nutrition ( ) 10.2/

Physical Activity( ) 11.2/
Personal Hygiene ( ) 12.2/
Substance Misuse ( ) 13.2/
Noncompliance Issues
Health Care ( ) 14.2/
Treatment Plan ( ) 15.2
Medication Regimen ( ) 16.2/
Dietary Regimen ( ) 17.2/
Health Equipment Use/Maintenance ( ) 18.2/

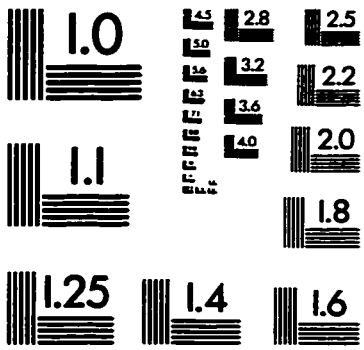
REFERRAL NEEDS Identified (2)

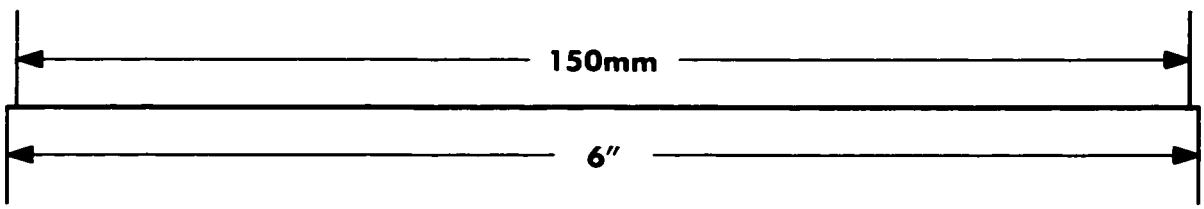
PSYCHOSOCIAL (2) Before.....1 After.....2
Community Resources ( ) 1.3/
Behavioral Patterns ( ) 3.3/
Role and Interpersonal Conflict ( ) 4.3/
Grief and Depression ( ) 5.3/

Data Verified ( )

Data Entered ( )

TEST TARGET (QA-3)





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