CLASSIFICATION OF SCI REHABILITATION TREATMENTS

SCIRehab Project Series: The Social Work/Case Management Taxonomy

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Received January 8, 2009; accepted January 22, 2009

Abstract

Context: Social work and case management (SW/CM) are integral components of acute inpatient spinal cord injury (SCI) rehabilitation. However, evidence is sparse regarding the impact of SW/CM interventions on outcomes. To advance research on SW/CM clinical practice in SCI rehabilitation, SW/CM providers and researchers first must have standard classifications for SW/CM interventions.

Background/Objective: To develop a taxonomy (classification) of the various interventions and services that comprise SW/CM.

Methods: A group of SW/CM clinicians compiled a list of activities performed as routine practice at the participating rehabilitation facilities. These activities were grouped and defined systematically.

Results: The resulting taxonomy includes 8 major activity topics (financial planning, discharge planning, discharge services, supportive counseling, information about and referral to peer/advocacy groups, education about SCI and other relevant topics, information about and referral to community/in-house services, and team conferences), which were further stratified into specific content areas. Interactions with the patient, family, or other team members and resources, along with descriptions of the interactions that are applicable to each of the 8 activity topics, were included as well.

Conclusion: An intervention taxonomy is required to study the SW/CM interventions and the potential association with positive rehabilitation outcomes for patients with SCI. The SW/CM taxonomy developed for the SCIRehab project, which will be used with 1,500 patients admitted to 6 SCIRehab centers over 2.5 years, will provide an infrastructure for such research.

J Spinal Cord Med. June 2009;32(3):336–342

Key Words: Spinal cord injuries; Rehabilitation, physical; Tetraplegia; Paraplegia; Social work, case management; Disability

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The contents of this article were developed under grants from the Department of Education's National Institute on Disability and Rehabilitation Research, grant numbers H133A060103 and H133N060005 to Craig Hospital, H133N060028 to National Rehabilitation Hospital, H133A21943–16 to Carolinas Rehabilitation, H133N060009 to Shepherd Center and H133N060014 to Rehabilitation Institute of Chicago. However, these contents do not necessarily represent the policy of the Department of Education, and endorsement by the federal government should not be assumed.

This is the 9th in a series of 9 articles describing The SCIRehab Project: Classification of SCI Rehabilitation Treatments.

INTRODUCTION

The need for social work and case management (SW/CM) services can span the lifetime of a person with spinal cord injury (SCI). However, several goals must be met by SW/CM personnel during inpatient rehabilitation: promotion of patient satisfaction by optimizing patient self-care, assistance with the provision of quality and cost-effective care, development of a care plan that focuses on the patient, balancing of the needs of the patient and family with the effective use of resources, and service of SW/CM personnel in patient advocacy in the health care system (1). Expertise in financial planning, discharge services, and community and in-home services, along with knowledge of organized peer and advocacy groups, are unique SW/CM contributions that may influence patient reintegration into the community.

Table 1. SW/CM Administrative and Activity Information

Administrative Information	
Date	
Patient name	
Clinician name	
Activities ^{a,b}	
Financial planning	Peer/advocacy groups
Discharge planning	Education topics
Discharge services	Community/in-house services
Supportive counseling	Team conferences or consults

^a Time spent on each activity is documented.

^b More than one activity may be documented for each day. Additional descriptors for each activity are documented as specified in Tables 2 through 5.

Manns and Chad (2) identified 9 quality-of-life components that are of greatest significance for individuals with tetraplegia or paraplegia: physical function and independence, accessibility of the environment, emotional well-being, stigma, spontaneity, relationships, social function, occupation, and finances. SW/CM personnel address most of these themes; however, little research has been conducted about what are the most useful or effective SW/CM interventions. SW/CM services, in cooperation with collaborative, multidisciplinary care, have been shown to reduce some difficulties in the lives of trauma patients (3); however, a randomized controlled trial of a disease management program for patients with more than 72 hours of continuous mechanical ventilation in an intensive care unit and their caregivers did not demonstrate a statistically significant effect of disease management on long-term outcomes (depression, overall health, and caregiver burden) (4). In contrast, a study by the American Hospital Association, performed when case management as a profession was still in its infancy, concluded that the investment in case management can “achieve a higher and/or faster level of recovery, which ultimately results in lower costs” (5). A case study by Glidden (6) demonstrated the contrast in outcomes between patients with SCI who receive on-site case management intervention and those who do not. She compared the social work interventions in two SCI persons: one with continuous intervention throughout his experience and another with minimal intervention. In her review, Glidden describes the financial, physical, emotional, and social instabilities that may decrease with the participation of SW/CM.

The evidence base for many SW/CM interventions is limited, and there is no commonly accepted taxonomy for categorizing SW/CM interventions in relation to SCI rehabilitation, which would be useful to establish an evidence base. Development of this taxonomy has been hindered by the large variety in both the terminology used and the types of professionals active in the field. SCI

inpatient facilities employ a variety of clinicians with different training and certifications to perform SW/CM functions (eg, case manager, patient and family service counselor, social worker, disease manager, rehabilitation counselor). Not surprisingly, the job descriptions can be as diverse as the titles.

The American Heart Association Writing Group established a taxonomy of disease management in 8 domains: patient population, intervention recipient, intervention content, delivery personnel, method of communication, intensity and complexity, environment, and clinical outcomes (7). Each of these domains includes additional descriptors. This taxonomy provides a general framework of case management but is not specific to SW/CM in the SCI rehabilitation setting. This article aims to outline the functions and services that encompass SW/CM in the acute inpatient rehabilitation of patients with SCI.

SCIREHAB PROJECT

The SCIREhab Project is a 5-year research effort designed to determine which SCI rehabilitation activities and interventions are associated most strongly with positive outcomes at 1 year postinjury in different categories of patients. Over 2.5 years, 1,500 patients with traumatic SCI consenting to participate at 6 SCI centers will be enrolled. The first article in the series (8) describes how the practice-based evidence methodology is applied to the SCIREhab project, including the importance of capturing center-to-center and clinician-to-clinician practice differences. It also presents the SCIREhab hypotheses and research questions. The second paper in the series (9) describes the iterative process used by all disciplines involved in the SCIREhab project to develop discipline-specific taxonomies.

THE SW/CM TAXONOMY

The SW/CM taxonomy includes 8 major activity categories used with patients with SCI (Table 1): financial planning, discharge planning, discharge services, supportive counseling, provision of information about and referral to peer/advocacy groups, education about SCI and other relevant topics, provision of information about and referral to community/in-house services, and team and patient/family conferences. Documentation of time spent on activities is consistent with the approach of the other disciplines and is described in the second article in the present series (9). SW/CM professionals capture time spent on each activity each day of rehabilitation. Team and family conferences are documented only if they consume 15 minutes of time or more. This restriction reduced the documentation burden on clinicians, who therefore did not have to include all brief conversations about a patient’s condition that could be construed as conferences.

Common to the documentation of all SW/CM activities is the identification of the person or persons involved in the interaction (Table 2). In addition to

Table 2. Interactions of SWs/CMs

Patient
Family/caregiver/significant other
Clinical team members
Nonclinical team members
Community resources
Research/Internet searches

patients and families, SW/CM specialists often interact with clinical (eg, therapists, nurses, physicians) and nonclinical team members (eg, legal consultants, insurance case managers) and community resource personnel. Recently, use of and communication through Internet sites have become important parts of SW/CM discharge planning; this provides an indirect link to community resources, especially for patients treated in SCI rehabilitation centers within large catchment areas or from out of state. Each SW/CM activity is described as educational, a referral process, or both (Table 3). The activity may also include completion of the complicated applications associated with many insurance and financial assistance programs. Within each SW/CM activity (Table 4), additional details are identified, as described in the following.

Financial Planning

SW/CM focuses on providing information on and assistance with various aspects of financial assessment and planning (Table 4). Because of the likelihood of patients' decreased income and significant costs as a result of SCI, education about and assistance with applications for Supplemental Security Insurance (SSI) and Social Security Disability Insurance represent an important aspect of financial assistance. Patients and families frequently lack understanding of these programs, and thus, education and assistance with the process may help families to ensure an income source.

Following catastrophic injury, patients and families often find that their communities, friends, religious groups, or other organizations express interest in fundraising with or for the patient. Education and information regarding fundraising that SW/CM specialists provide to the patient can be influential in maximizing the benefits of these opportunities. Profits from fundraising activities provide financial support for ongoing bills or for items that may not be covered by insurance, eg, modified transportation and home modifications.

Table 3. Education/Referral

Education/Discussion
Referral
Both education/discussion and referral
Application completion

Table 4. SW/CM Activity Topics

<u>Financial Planning^a</u>	<u>Discharge Planning^a</u>
Supplemental Security Insurance (SSI)	Home
Home accessibility	Social Security Disability Insurance (SSDI)
Fundraising	Barriers to discharge
Trust fund/facility funds	Nursing home/long-term acute care
Medicare/Medicaid	Assisted living
Insurance	Referring facility
Alternative benefits/funding/self-pay	Transitional living facility
Workers' compensation	Alternative living environment
<u>Discharge Services^a</u>	<u>Supportive Counseling^a</u>
Home health	Physical/psychological abuse
Personal care services	Alcohol/substance abuse
Outpatient therapy	Cultural considerations
Day rehabilitation program	Coping/adjustment
Adult day care	Knowledge of injury
Substance abuse program	Medical comorbidities
Medical follow-up	Sexuality
Durable medical equipment (DME)	
Supplies/medications	
<u>Peer/Advocacy Groups^a</u>	<u>Education^a</u>
National organizations	SCI written materials
Support groups	Advance directives
Independent living centers	Community re-entry
	Guardianship
<u>Community/In-House Services^a</u>	<u>Team and Patient/Family Conferences</u>
Waiver program	See Table 5
Lifelines	
Crime victims assistance	
Vocational	
Department of Aging	
Correspondence	
Chaplain	
Legal aid/legal services	
Transportation	
Housing	
Service recovery/care coordination	
Other services	

^a Each topic is associated with interactions (Table 2) and education/referral (Table 3).

SW/CM professionals counsel patients and families about trust funds and facility funds. Establishment of a trust fund by the family, the community, or other entities may occur following injury. This type of trust fund may provide a repository for monies received from insurance settlements, donations, or other sources, which avoids causing disqualification for Medicaid and/or SSI. Several

SCIRehab facilities have access to in-house (facility) funds. These funds, which may be provided through the community, companies, or private donations or generated by the facility, are used for a variety of patient needs, such as family transportation, housing, equipment, etc.

SW/CM practitioners also provide support and assistance with navigating the complicated processes of obtaining funds and payment for services from benefit sources such as Medicaid/Medicare, insurance plans, and workers' compensation for services received (eg, inpatient hospitalization, outpatient services, home health, and equipment). Alternative benefits/funding include low-interest loans, health insurance through COBRA, long- and short-term disability, long-term care insurance, veterans' or military benefits, no-fault income replacement, and social services programs.

Significant diversity in how utilization review (UR) tasks are employed at each center limited the inclusion of UR in the SCIRehab documentation. At some centers, departments or personnel, separate from SW/CM functions, perform UR activities and focus on negotiations with insurers to extend or justify the length of stay (LOS) in the rehabilitation center. The result of UR negotiations will be apparent in a patient's LOS and the amount of therapy received. Because UR contributes to patient outcomes only indirectly, UR activities were not included in the SW/CM taxonomy (see Discussion section).

Discharge Planning

Returning patients to their homes or communities in a safe manner and developing resources to assist patients and families with remaining in their homes or communities are integral components of SW/CM. SW/CM professionals review the preferred discharge location identified by the patient and family and discuss safety, caregiver support needs, issues of accessibility to all or limited areas of the home, number of exits, etc. If barriers to a successful discharge are identified, SW/CM specialists work to resolve these issues with the patient and family (Table 4). For example, obese patients may need more than one caretaker to assist with daily care, or specialized equipment may be needed to support extra weight.

Unrealistic discharge plans also are identified as well: for example, elderly caretakers may be unable to provide the necessary care, or caregivers may have limited education and be unable to learn the complicated caregiving required for patients.

Legal and illegal immigrants often undergo complicated discharge processes. A non-English-speaking patient and/or family may not be able to participate fully in the rehabilitation process, including family training, without the use of an interpreter. The rehabilitation team must be able to communicate with the patient and family to ensure a safe discharge; thus, the rehabilitation center must provide interpreters. SW/CM personnel help to find the appropriate interpreter services as efficiently as

possible, because any delay increases the time that the patient does not receive appropriate therapy.

Patients and/or caregivers who reside in this country illegally do not qualify for state or federally funded programs. If caregivers need to travel to the United States from their country of residence to provide care for a patient, SW/CM specialists may have to write letters to foreign consulates asking that caregivers be granted permission to travel to the United States and remain for a period of time. This process usually takes several months, thereby affecting discharge preparations and LOS in the rehabilitation facility.

Income is another discharge barrier. A patient's loss of income may result in the family's inability to maintain their home or obtain necessary supplies and services. Finding other accommodations and qualifying for assistance services can take many months.

Noncompliance by the patient or family also affects the discharge process. A patient may be unwilling to become fully vested in his or her rehabilitation program and unwilling to meet goals as projected by the team. A family may be unwilling to participate in family training and fail to attend recommended meetings. Caregivers also may be slow or unwilling to make the recommended changes to their residence, thereby slowing the discharge process.

Unrealistic discharge hopes of the patient and family or identified barriers may lead to a change in discharge location. Permanent or interim stays in a nursing home, long-term acute care facility, assisted living center, transitional living facility, or other alternative living environment may need to be considered, which requires coordination by SW/CM. Alternative living environments such as a shelter, hotel, YWCA/YMCA, or prison may require additional planning.

Discharge Services

An integral responsibility of SW/CM is to identify and coordinate services that will enable the patient and family to make a smooth and safe transition to a community setting. Table 4 outlines the topic areas of discharge services, which include referrals made for or on behalf of the patient (eg, transportation arrangements).

SW/CM professionals discuss discharge service topics with the patient, family, and care team to decide how to best meet patient and family needs. Consideration is given to clinical issues, accessibility, and access to services from a financial/benefit perspective. For example, SW/CM personnel help the patient and family determine whether home health or outpatient therapy would be most appropriate. Is the patient able to get to a therapy site for outpatient therapy? Are there home or transportation accessibility issues? What is the patient's insurance benefit coverage for these services, and what is the best way to maximize the available benefits?

SW/CM experts help patients locate nonskilled personal care services and make referrals for home health services, which are provided by licensed clinicians

(registered nurses, licensed practical nurses, therapists, etc). They also coordinate referrals to programs such as adult day care, day rehabilitation, and substance abuse. Patients are given information regarding needed medical follow-up with the SCI physician, and/or follow-up appointments are scheduled for patients. SW/CM professionals make and/or facilitate referrals for specialized equipment and supplies (eg, intravenous therapy and respiratory supplies) to be delivered to the patient's home. They also make referrals for disposable supplies (eg, for bowel and bladder care) and educate the patient and family about what is covered by the patient's insurance. Patients are given information about how and where to obtain their medications, along with information regarding alternative providers and financial assistance programs, such as county hospitals/clinics and drug company assistance programs.

Supportive Counseling

Psychosocial issues are common areas of concern for patients with SCI and their families. Physical or psychological abuse, alcohol/drug abuse, cultural considerations, coping and adjustment, knowledge of injury, comorbidities, and sexuality are addressed by SW/CM personnel in the rehabilitation setting, often in tandem with staff psychologists. In conjunction with psychosocial support provided in response to these needs, SW/CM professionals consult with clinical team members and research community resources that will help to ensure a safe and successful discharge by establishing a link between the patient and these outside resources (Table 4).

Peer/Advocacy Groups

SW/CM specialists provide information about organizations that offer support and resources to patients with SCI (Table 4). National organizations and local independent living centers (ILCs) supply ongoing assistance to patients and families in their communities after discharge. National organizations can provide education and help keep patients up to date about disability legislation, new products, and SCI cure and care research through their websites, magazines, and conferences. Some also offer grants or scholarships to help finance items such as wheelchairs, recreation equipment, and home modifications. ILCs address immediate needs by providing information about local resources such as experienced home health providers, home modification contractors, legal aid, housing, etc. Some SCI rehabilitation facilities offer in-house support groups for patients and/or families, or they offer information on community support groups. Both national organizations and ILCs assist patients and families with networking, enabling them to connect with others with SCI who have similar issues, needs, or interests.

Education

Beginning at admission to the rehabilitation hospital, patients and families are educated about advanced

directives such as a living will and a durable health care power of attorney (Table 4). SW/CM professionals assist the patient to complete the appropriate documents if they choose and if the patients are competent to do so. If a patient does not have an advance directive and does not wish to complete the required documentation, the patient and family are educated about surrogacy laws, which are state-specific laws affirming that an individual can be named to make medical decisions on a patient's behalf only if the patient is unable to consent. Surrogacy laws designate a prioritized order of who can make decisions if the patient has not designated a decision maker. When appropriate, a patient's family is educated about guardianship and may choose to pursue this if it is thought that the patient may not be legally competent. Usually, the patient's rehabilitation physician, psychologist, and/or a consulting psychiatrist determine the patient's capacity for decision making.

Patients and families are provided education about support services and resources for persons with SCI in their immediate geographic area, as well as nationally. In addition, SW/CM personnel facilitate regular educational series and introduce patients to in-center resources (eg, library and computers for patient/family use).

Community/In-House Services

Community services and in-house hospital services provide important opportunities for patients with SCI. Education about and referral to services available to a person with an SCI empower the person to have a smooth transition from rehabilitation to the community. Examples of such services include monetary resources, emotional support, and/or physical assistance. Community and in-house services included in the SCIR rehab SW/CM taxonomy (Table 4) include resources that are used at the 6 centers and contribute to a patient's success in community integration.

Persons who qualify for their state Medicaid program may have access to state programs called waiver programs, which are developed and supported by a state's Medicaid program. Waiver programs aid persons with specific disabilities or specific needs or who fall into a specific age group. SW/CM specialists work with the patient and family to determine whether the patient is eligible for such assistance.

Lifelines are telephone services provided for a fee that link an individual with the police and fire department and/or the local hospital in the event of an emergency. Lifelines allow for an individual to live more independently with the reassurance that help is available immediately with "just the push of a button" on their telephone.

State-sponsored crime victim compensation programs help victims and their families relieve the financial burden brought about by a violent crime. Reimbursement or direct payment may be provided for services needed resulting from the crime that are not covered by

Table 5. Team and Patient/Family Conferences

Conference Topics	Interaction/Contact With
Medical	Patient
Goal setting	Family
Discharge	Insurance case manager
Behavior	Physician
Education	Nurse practitioner/physician assistant
Legal	Physical therapist
Other	Occupational therapist
	Recreational therapist
	Speech/language therapist
	Nurse
	Pharmacist
	Psychologist
	Social worker/case manager
	Hospital administrator
	Application completion

private insurance, medical aid programs, or other benefit programs. Patients and their families who live in a state that provides this service can apply for funding and financial support for medical bills and treatments, funeral and burial costs, lost wages, cleaning of a crime scene, replacement of valuable clothing, temporary emergency shelter or moving expenses, home repairs, and so forth.

Vocational rehabilitation (VR) services provide trained counselors to assist patients to return to work or school. At some SCIR rehab centers, SW/CM personnel may refer a patient to a VR counselor within the rehabilitation hospital; at other centers, referrals are made to a vocational counselor in the community, most likely at the nearest state/federal VR program.

Each state has a Department of Aging, which is a community-based program for residents 60 years of age or older. Programs and services offered vary by state and may include adult day care, case management services, health insurance counseling, in-home support, respite aid services, nursing home care, etc.

Team and Patient/Family Conferences

Team conferences are held at regularly scheduled intervals within each rehabilitation center and allow the interdisciplinary treatment team to review each patient's goals and interim progress and to make adjustments to goals as needed (Table 5). Often the patient and family are invited to participate in conferences to discuss specific issues (eg, medical condition, discharge arrangements, or behavioral issues). This provides an opportunity for the patient and family to learn about the patient's injury, progress, obstacles, expected goals of rehabilitation, and potential outcomes. Conference discussions assist the treatment team to set realistic goals about discharge, determine optimal postdischarge needs (eg, outpatient therapy, day programs), and review progress with the patient and family. If the patient or family exhibits

problematic behaviors, these conferences also provide a forum to discuss noncompliance, safety, or other issues that impact the patient's rehabilitation. For each conference, SW/CM professionals record the main topic or topics of the conference and the categories of individuals attending. This information will facilitate SCIR rehab analyses that assess team coordination and its impact on outcomes.

DISCUSSION

As part of the SCIR rehab project, SW/CM specialists were charged with developing a mechanism to capture information about clinical activities that included the most important activity-specific details but did not create an undue burden on staff. This became especially important because some centers place a great emphasis on specific activities that are not common in other sites' SW/CM departments. The interactive process that was used to develop a taxonomy of SW/CM activities and interventions provided an opportunity to explore and include the wide range of interventions, services, and other activities provided in the realm of SW/CM for SCI rehabilitation. SW/CM services are delivered by professionals with diverse training such as nursing, social work, case management, family services, rehabilitation counseling, and other specialty certifications. The services provided may vary according to the training of clinicians involved. Clinicians realized that there is a delicate balance between collecting detail that was sufficient to demonstrate variations in treatment methods but that did not create a time-intensive burden.

Some of the SCIR rehab sites include UR activities as part of their SW/CM roles, whereas other centers perform these functions through other personnel. Significant amounts of time may be spent negotiating with third-party payers or justifying why a patient's stay needs to be extended. However, UR activities were not included as part of the SW/CM taxonomy because these activities focus more on the insurance provider than the patient. Whatever benefit is achieved by UR intervention on behalf of the patient would be evident in more therapy documented by physical and occupational therapists and other professionals as the result of an extension of the LOS.

SCIR rehab centers differ in how team conferences are conducted, whether they include patients and families, and the amount of time spent on these conferences. Some centers conduct frequent short discussions about each patient among team members during morning "rounds." These discussions may consume only a few minutes or, if significant issues require discussion, longer amounts of time. In developing the SW/CM taxonomy and attempting to quantify "dose of intervention" by including the amount of time spent, the SW/CM group was cognizant of the documentation burden of including "short" discussions each time they occurred. Thus, only conferences that consumed 15 minutes or more were included. This, of course, risks the exclusion of significant

team interactions if the regular “short” discussions are summed. Typically, if patients and/or families are included in conferences, the conferences include more time than those that involve team members only. Centers that include patients/families in team conferences regularly may show a larger amount of time spent in conferences.

The SW/CM taxonomy lists specific tasks under headings that are common to most SCIREhab facilities. However, nomenclature differs among facilities, and thus, clinicians at each center needed to become familiar with the terms used in SW/CM documentation. For example, SW/CM experts at one facility may consider a waiver program as a community resource, whereas another facility considers it a financial resource. SW/CM professionals assist patients and families with completion of a variety of applications and thus, application completion is included under the education/referral documentation option so that it can be employed where appropriate.

CONCLUSION

The engagement of clinicians in the development and testing of the SCIREhab SW/CM taxonomy may have led to clinicians trying different approaches suggested by colleagues from other centers. The informative discussions about practice variation among the centers provided a unique opportunity for clinicians to learn about dissimilarities in SW/CM practice and share ideas, which is similar to clinicians attending professional meetings or reading the literature to learn about alternative approaches to the practice of their profession.

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