



Craig Hospital

Redefining Possible for People with Spinal Cord and Brain Injuries

Spinal Cord Injury Re-evaluations and Follow-up Care

Re-evaluations and follow-up care at a specialty center of excellence best insure the durability of the outcomes achieved and the investment made in initial rehabilitation

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Kenny Hosack
Director of Provider Relations
Craig Hospital

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OVERVIEW

Spinal Cord Injury Re-evaluations and Follow-up

Outpatient re-evaluations at Craig Hospital for patients with spinal cord injury (SCI) are a natural and valuable extension of our inpatient rehabilitation program. It has been well-documented in the literature and has been our experience that patients with spinal cord injury require specialized follow-up for maximum health, revention of complications, and long term management of costs. From an insurance perspective, re-evaluations are important to best insure the durability of the outcomes achieved and the investment made in initial rehabilitation. The long-term medical management costs of SCI over patient lifetimes are far greater than the initial acute care rehabilitation costs. Experience demonstrates significant cost savings can be realized when long-term management occurs in a proactive and preventative way, versus responding to medical emergencies or problems after they occur.

For example, the costs for a single surgical repair of a decubitus ulcer (which can occur because of equipment problems, posture, poor transfer technique, or inadequate patient and family training), Would be greater than the costs of annual re-evaluations over an entire decade. Changes in the neurological status and the function of patients with spinal cord injury, e.g. bladder management, bowel management, durable medical equipment, spinal cord cysts, etc. can be identified in a skilled re-evaluation and interventions implemented. The occurrence of overuse injuries, from living a life with a disability, is also addressed.

Although SCI re-evaluations can take place in non-SCI Model Center locations, if the practitioner and evaluation team are not experienced in evaluating potential complications and integrating the results into recommendations, problems can be missed, and the associated costs to correct the problems at a later date can be significant. We work with case managers and claims executives from various workers compensation carriers and reinsurance companies who send us patients from all over the U.S. Many have relied on Craig Hospital's wisdom over the years with these patients in terms of SCI expertise, comprehensive management with therapists involved, and communication with the carrier.

Features and Components of Spinal Cord Injury Re-evaluations

The interdisciplinary re-evaluations at Craig Hospital are managed by a nurse practitioner or physician with years of SCI experience at Craig, and include nurses, therapists and clinical care managers. Patients and their families may stay in our on-campus apartments or nearby hotels and are seen cost-effectively as outpatients. The evaluation is comprehensive and interdisciplinary, beginning several weeks ahead with calls from our nurses to the patient, and from our clinical care managers to insurance case managers to align expectations. The comprehensive specialty evaluation includes:

- a review of pertinent records and history-taking as necessary
- an onsite SCI physical examination by our specialized nurse practitioners
- an onsite nursing evaluation in the areas of bowel, bladder, medications, nutrition, and skin condition
- on-site urologic exam
- on-site physical and occupational therapy evaluations for motor/sensory changes, posture, mobility, activities of daily living and functional tests, equipment evaluation and minor repairs or adjustments
- on site psychosocial evaluation
- on site consultations with other specialists as necessary (neurosurgical consults, skin, pulmonary, etc)
- radiological studies, CT, MRI, etc as necessary on campus at Swedish Medical Center.
- a wrap-up team conference with the patient, family, staff, and case manager with evaluation results, and recommendations for a plan of care.
- other services as requested in advance, e.g. gait/bracing clinic, seated mobility evaluations, podiatry, adaptive transportation consults, etc.
- written reports documenting the results and recommendations
- on-site clinical care managers to provide assistance/resources regarding funding or caregiver needs

A typical re-evaluation at Craig is conducted in an intensive 3-4 day period, and is managed by our Physician/Nurse Practitioner management model. Patients and families typically arrive on Sunday; begin the re-evaluation Monday morning, and generally wrap-up on Wednesday or Thursday. The purpose of the re-evaluation is to evaluate for necessary interventions and make recommendations for a plan of care and local follow up, collaborating with primary providers, as specialty consultants. In an average year Craig Hospital conducts more than 800 comprehensive outpatient SCI re-evaluations, and patients come to Craig from 48-50 states for this efficient and effective service. For more than five decades Craig Hospital has continually worked to improve this comprehensive and valuable outpatient SCI system of care.

Frequency of Spinal Cord Injury Re-evaluations

To begin the re-evaluation process, following initial inpatient rehabilitation, we typically recommend that patients with SCI have this specialized outpatient evaluation at 6-8 months post discharge. The purpose is to make certain that discharge plans have been carried out, conditions and routines at home are stabilizing, and that patients are staying healthy and have established relationships with local providers for ongoing care as necessary. Whether patients receive their re-evaluation at Craig or elsewhere is an individual choice by patients, families, and their insurance carriers.

After the first outpatient evaluation we typically recommend that patients with SCI have an annual re-evaluation for the first 3-5 years post initial rehabilitation, or until such time as patients have established a consistent record of healthy routines, establishing relationships with their community-based resources.

We may recommend a reduction in frequency, depending on the patient and the expertise of their local providers. Some patients elect to get their re-evaluations locally, but come back to Craig every 3-5 years as a precaution to insure that conditions or complications may not have been missed locally. Local physicians may not be experienced with spinal cord injury usually appreciate the assurance that Craig is still involved. As patients age with spinal cord injury, especially into their 2nd and 3rd decade of injury, their medical and functional conditions can change dramatically, and may require a resumption of annual evaluations. Many of the costly complications associated with the aging process are preventable, if identified early.

New Patient Evaluations and Re-evaluation Referral Process

Patients, case managers, and claims adjusters interested in a re-evaluation for a former Craig patient should call Craig's Outpatient Admissions Dept. at 303-789-8215. For patients new to Craig, calls should be made to the Outpatient Intake Coordinator at 303-789-8474. Current medical records are typically requested on new evaluation patients who have never been to Craig and on re-evaluation patients who have not been to Craig for three years or greater.

Outpatient Services Other than Re-evaluations

When patients with spinal cord injury do not require the full spectrum of care or need assistance with a specific concern between re-evaluations, our physical, occupational and speech therapists may work with patients on an individual basis to provide expertise on a focused area of care or evaluation. In this situation a single visit or two may be all the patient needs. Additionally, patients who live locally may choose Craig Hospital Outpatient Services for ongoing therapy needs. A referral from a Primary Care Physician may be required. For patients who are new to Craig Hospital and have questions regarding these services or want to schedule a therapy evaluation or treatment, the Outpatient Intake Coordinator should be contacted at 303-789-8474.

Re-evaluations: Summary

In summary, we recommend regular outpatient re-evaluations after initial inpatient SCI treatment at 6-8 months, then annually afterwards. Patients who completed their initial inpatient rehabilitation at Craig are often anxious to return to Craig for their annual re-evaluations. They feel comfortable returning to a system of care and professionals they trust for a comprehensive re-evaluation, a program who knows their history and has their medical records. They also benefit psychologically from re-visiting the friendships and bonds created during their inpatient stay. From an insurance perspective, Craig cannot eliminate the long-term management costs of SCI, but we can partner with insurance carriers and local providers in managing costs, and reducing preventable complications and costs. We know that most carriers respect the value of specialty centers such as Craig for the acute rehabilitation of patients with spinal cord injury, and many know the value of Craig Hospital for the long term disability management piece as well. We encourage carriers and case managers to periodically utilize our expertise and experience for the chronic follow-up care necessary in spinal cord injury. This certainly doesn't mean that every medical issue or re-evaluation should be addressed by Craig, but periodic and strategic re-evaluations are cost-effective when provided by the experienced staff at Craig.



Initial Rehabilitation



Initial Outpatient Re-evaluation



Annual Re-evaluation



Professional Literature Supporting Spinal Cord Injury Re-evaluations

"Regular Follow-up, Early Illness Intervention, and Prevention of Complications. The primary SCI physician who cares for the patient during the initial hospitalization provides and directs ongoing care, periodic examinations, laboratory tests, and other evaluations as needed. Periodic examinations are important to determine the health status of a population that is vulnerable to certain medical complications, some of which can begin occultly, and to assess compliance with prescribed treatment... In addition an annual evaluation of equipment, particularly wheelchair(s), adaptive equipment, and pressure relief devices, is necessary".

Stover S., et. al. System Benefits, Spinal Cord Injury: Clinical Outcomes from the Model Systems. Aspen Publishers, 1995. System Benefits, Chapter 15, pp. 324

"After neurological plateau has been reached, conduct periodic evaluations of neurological status throughout the individual's lifetime. Individuals with SCI should receive periodic routine health evaluations for non-SCI and SCI-related health needs."

Lanig I., et.al. A Practical Guide to Health Promotion After Spinal Cord Injury. Aspen Publishers, 1996

"The intervals for periodic health screening must be individualized, but at a minimum should follow the recommendations of the U.S. Preventive Services Task Force (1996) as outlined for the general population."

Consortium for Spinal Cord Medicine, Outcomes Following Traumatic Spinal Cord Injury: Clinical Practice Guidelines for Health-Care Professionals. Paralyzed Veterans of America, 1999 p. 9

"Essential to the recognition and management of spinal cord injury aging problems is systematic surveillance by an experienced spinal cord injury team and a program of education leading to alternative strategies...In general, it is recommended that contact be made with a spinal cord injury system with primary care capability every one to three years or more frequently if problems develop. Services should include comprehensive medical, equipment, psychological and social assessments... Obviously, follow-up assessments will be more frequent as problems are encountered, generalized decline becomes more apparent, or as individuals appear to be unable to monitor themselves effectively... Frequency of follow-up contact, then, can be determined by a combination of variables: at risk issues, individual responsibility and ability to monitor at risk issues, access to primary care versus rehabilitation care versus crisis care, funding for surveillance care."

Sims B et.al. A Model of Lifetime Services, Aging with Spinal Cord Injury, Whiteneck G. et. al. Eds., Demos Publications, 1993, Chapter 29 pp. 365-367

"Components of the basic SCI-related health assessment conducted every one to three years after completion of the acute medical rehabilitation program should include the following: comprehensive history and physical examination (including motor and sensory neurologic evaluation), body weight, blood pressure and pulse, forced vital capacity (FVC), hematologic and biochemical studies, urological evaluation, upper tract urological evaluation, lower tract, nursing evaluation, occupational and physical therapy evaluation, psychosocial/social evaluation, leisure activity assessment"

Lanig I., et.al. A Practical Guide to Health Promotion After Spinal Cord Injury. Aspen Publishers, 1996

"It should be emphasized that the neurogenic bladder is a continuously changing system. Early in the disease process, the management techniques may vary considerably from those used in the long term. Thus a patient with a SCI should undergo testing on a frequent basis (yearly initially) to re-evaluate the urinary management method for appropriateness, safety, and efficacy. This process of surveillance and optimization of management technique is critical to continued minimization of morbidity associated with the urinary system in spinal cord injured individuals."

Horton J., et.al. Bladder Management for the Evolving Spinal Cord Injury: Options and Considerations. Topics in Spinal Cord Injury Rehabilitation: Secondary Medical Conditions: Prevention and Management in the Face of Shrinking Resources. Ralph Marino, Issue Ed., David Apple, Ed., Vol. 9 No. 1, 2003 p. 50

"Periodic Assessment. Even though the periodic assessment has become the foundation of long-term SCI follow-up, there is little evidence-based rationale for what should comprise such evaluations. What has evolved is a standard of practice that is derived from cumulative clinical experience rather than from hypothesis-driven investigation. Nonetheless, a general consensus exists about the recommended elements (if not the specific procedures) of periodic assessment, not only for the general populations, but also for the specific issues of SCI care... this guideline is not intended to represent everything that every SCI survivor might need. It should more appropriately be used as a reference for the minimal standard of routine follow-up for healthy spinal cord-injured patients."

SCI Specific - Things to do daily

Self skin checks

Things to do every year

Check weight and blood pressure

Flu immunization, especially for T8 and higher

Things to do at least every 2-3 years with SCI specialist/team*

Full history and physical review with physician*

Assess equipment and posture*

Assess range of motion, contractures, and functional status*

Urologic assessment, upper-lower tracts**

Full skin evaluation*

Things to do at least every 5 years with SCI specialist/team

Motor and sensory testing

Review changes in life situation, including coping, adjustment, life satisfaction

Things to do every 10 years

Pneumococcal pneumonia vaccination at earliest opportunity, especially for T8 and higher

*Assessment done annually for the first 3-5 years after injury, until health is established**

Do annually for the first 3 years after any major change in urologic management."

Lammertse D., Maintaining Health Long-Term with Spinal Cord Injury. Topics in Spinal Cord Injury Rehabilitation: Aging with Spinal Cord Injury. Kemp B., Issue Ed., David Apple, Ed., Vol 6, No. 5, Winter, 2001 pp. 15-17

"Generally speaking, individuals are evaluated (for seating and mobility) once every 5 years. Exceptions might occur in the instance of patient growth or weight gain, a pressure ulcer, postural deformity, loss of function, medical complication, or equipment failure. Annual evaluations; should be performed on children and young adults with SCI because of their propensity for developing a scoliotic posture."

Kreutz D., Seating and Mobility Consideration, Spinal Cord Injury Rehabilitation 2002: Life Care Planning for Spinal Cord Injury Vol 7 No. 4 Spring 2002, p. 35

"Preventive strategies include education of the spinal cord injured person and their caregivers, appropriate supplies, availability of physician care and follow-up, routine bladder and renal function screening, and appropriate interventions. Testing that is required on an intermittent basis includes renal ultrasounds, urodynamics, urinalysis, and urine culture and sensitivity."

Winkler T., Medical Issues that Impact Life Care Planning for Spinal Cord Injury, Topics in Spinal Cord Injury Rehabilitation Vol. 7, No. #4 Spring 2002 p. 26



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