

**REHABILITATION CENTER
SANTA CLARA VALLEY MEDICAL CENTER**

**SPINAL CORD INJURY REHABILITATION PROGRAM
SCOPE OF CARE**

POLICY

The SCVMC Spinal Cord Injury (SCI) Rehabilitation Program provides a broad range of therapeutic activities structured in a program individualized to meet each patient's strengths, cultural needs, age requirements, abilities and preferences. The program serves both traumatic and non-traumatic spinal cord injuries with incomplete and complete injuries at all spinal levels. Co-morbidities may include but are not limited to respiratory compromise, dysphagia, obesity, orthopedic injuries, brain injuries, renal dysfunction, psychiatric diagnosis, substance abuse, communication disorders, and visual dysfunction. Considered payer sources include Medicare, Medi-Cal, Commercial, Health Maintenance Organizations (HMO), Workers Compensation, California Children's Services (CCS), and private pay. Final authorization is at the discretion of the insurance company. Referrals are accepted from all sources which may include hospital, physician/group, payer, and private pay.

Admission Criteria:

1. Patient must have a spinal cord injury resulting in a significant loss of function.
2. Patient must be medically stable, without complications, which would interfere with intensive rehab, and attainment of realistic rehab goals.
3. Must be 13 years or older.
4. Must have a primary presenting problem in two or more of the following:
 - A. Self-care
 - B. Mobility
 - C. Motor dysfunction of one or more limbs
 - D. Bowel/bladder control/management
 - E. Pain management
 - F. Safety
 - G. Cognitive functioning
 - H. Communication
 - I. Swallowing difficulties
5. Patient must require an interdisciplinary team approach, consisting of at least 2 therapies physical therapy, occupational therapy, or speech pathology.
6. Patient must be able to tolerate and benefit from at least 3 hours of therapy 5 days/week.
7. Must have a viable discharge plan generally to a non-institutional setting.
8. Demonstrates rehab potential, and is expected to make a significant improvement in functional skills within a reasonable period of time.
9. Requires 24 hour rehabilitation nursing.
10. Requires daily medical supervision of a physician experienced in rehabilitation medicine.

Transition/Discharge Criteria:

1. Patient requires intensive medical treatment not provided by the program such as telemetry, surgery, or life supporting treatment.
2. Patient is unable to participate or unwilling to participate in the required therapy program.
3. Patient is unable to be safely discharged to a non-institutional setting.
4. Patient no longer requires daily medical management.
5. Patient has made enough progress to be safely discharged to non-institutional setting.

Services available:

The following services are provided on site 24 hours a day, seven days a week:

- Medical management by a physical medicine and rehabilitation physician
- Rehabilitation nursing services provided by a registered nurse including assessment, implementation, planning, and critical decision making
- Diagnostic imaging
- Laboratory
- Pharmacy services
- Comprehensive medical and surgical specialty services include but not limited to: Orthopedics, Neurology, Neurosurgery, Cardiology, Endocrinology, Pulmonology, General Surgery, Urology, Internal Medicine, Interventional Radiology, and Psychiatry.

Consultations and results are received in a timely fashion, typically within 24 hours.

Other services provided on site by physician referral and are based on the individualized needs of the person:

- Case Management
- Chaplaincy
- Dialysis
- Nutrition
- Occupational Therapy (OT)
- Ostomy/wound care
- Peer support
- Physical Therapy (PT)
- Psychology/Neuropsychology
- Respiratory Care
- Social Services
- Speech Pathology (SLP)
- Therapeutic Recreation
- Visual Assessment

Services available through contractual agreements:

- Acupuncture
- Orthotic services
- Prosthetic services

Referrals are made to community based programs for:

- Driver rehabilitation/attendant van
- Inpatient substance abuse treatment
- Physical environmental modifications
- Rehabilitation engineering
- Vocational rehabilitation
- Transportation options

Rehabilitation Focus Areas:

I. MOTOR FUNCTION

The SCI Program focuses on functional mobility, balance, standing, walking, strengthening, spasticity management, treatment of musculoskeletal complications, and physical conditioning. In addition, the SCI Program includes instruction and practice for family and/or caregivers to prepare them to assist the patient at home. Adaptive equipment is provided to aid motor function as appropriate. Pool therapy is available and addresses stretching, walking, exercising, and relaxation, in groups or individually.

II. SENSATION AND PERCEPTION

Compensation training for sensory loss due to SCI is provided in both functional and nonfunctional activities. Education is provided to ensure patient safety. Patients are assessed for concomitant brain injury. If perceptual deficits are identified on initial evaluation and addressed in functional therapeutic activities. The environment may be modified with signage to remind staff and family of the best way to approach the patient or the best placement of call lights. Neurovision assessment and training are performed by OT when indicated. Reading material is modified by SLP as appropriate. Assistive devices are utilized to optimize attention. Consultations with audiology, ENT, optometry and ophthalmology are available.

III. PSYCHOLOGICAL NEEDS

Mood assessment and psychological history are obtained on admission. Rehab psychology and/or psychiatry consultation are available in SCI Program to evaluate for psychotherapy, pharmacotherapy, and referral to community resources when necessary. One to one supervision by rehab staff around the clock is available when self-harm is a concern. Chemical use/ abuse or dependency is assessed and resources are provided for ongoing care if necessary. Family and caregiver support services are available when needed and referrals for ongoing services are made should they be required. When needed couples therapy is provided to assist in restoring previous intimacy and roles in the relationship.

IV. COMMUNICATION

Assessment and treatment are guided by SLP. Communication strategies, modalities, and/or technologies are used and reinforced by other disciplines within

individual and group settings. When needed, augmentative communication devices are provided and discharge recommendations given to patient and family/caregiver.

V. COGNITION

Formal and informal assessments are performed on admission and daily by various rehabilitation staff including neuropsychology, SLP, physician, rehab nurse, PT, and OT. Treatment occurs within individual and group settings.

VI. BEHAVIOR

Formal and informal assessments are performed on admission and daily by various rehabilitation staff including neuropsychology, SLP, physician, rehab nurse, PT, and OT. Behavioral observation and input from family members or friends are also solicited. If certain identified behaviors are assessed to pose safety risks to the patient and/or others, interfere with optimal therapy participation, or present potential challenges to discharge, then these behaviors are tracked every shift and a behavioral management plan is implemented. One to one supervision by rehab staff around the clock is available when safety is a concern. Pharmacotherapy is employed when necessary. Psychiatry consultation is available.

VII. SWALLOW

Preadmission screening identifies patients at risk for dysphagia. Swallow evaluation by SLP on admission is ordered when dysphagia is a concern. Diet restrictions are upgraded when safe and appropriate, as deemed by SLP. Video fluoroscopy and FEES are tools available for SLP dysphagia evaluation. Nursing and SLP together provide appropriate individual or group supervision for meals. NGT placement can be performed on the unit by nursing or physician. Gastrostomy placement is performed on consultation with gastroenterology or interventional radiology. Gastrostomy removal is performed on the unit, when indicated. Family teaching is performed individually by SLP and nursing, and formally in patient education classes held by SLP. Adaptive devices are provided to maximize the patient's ability to self feed.

VIII. HYDRATION AND NUTRITION

When nutritional status is a clinical concern, the SCI Program monitors daily intake/output, skin turgor, secretions, caloric count, periodic weight measurements, and laboratory tests. Physician and registered dietician determine physiologic fluid goals. The interdisciplinary team assists with meeting fluid goals. For patients with dysphagia, SLP may evaluate for free water protocol to assist with adequate hydration. Fluid supplementation, either intravenously or enterally, is provided as needed. Family is able to provide home food; the rehab unit provides refrigeration and microwave oven. Ethnic diets are offered and dietary preferences can be accommodated by the hospital kitchen. The SCI Program also provides family and patient education and training regarding diet restrictions and recommendations including administration of tube feeds when appropriate.

IX. BOWEL AND BLADDER FUNCTION

Bowel and bladder function are assessed on admission by the physician and nursing. Following assessment of current bowel function, bowel training programs are initiated. Previous habits and dietary education are utilized to achieve a successful bowel training program. Bladder function is assessed daily and when appropriate, intermittent catheterization or suprapubic catheter training is provided. Patient and caregiver training are provided one on one and in educational classes.

X. MEDICAL STATUS AND COMORBIDITIES

Initial and daily evaluations of medical status and comorbidities are performed by the physician and nursing. Monitoring and management recommendations are made by the physician. Patients are monitored for any neurological changes, hypotensive, or hypertensive episodes. Patients and caregivers are provided education regarding identifying and managing autonomic dysreflexia. Daily assessment is provided for identifying deep vein thrombosis on clinical exam, including leg measurements by rehab nursing. Telemetry is available in therapy for patients who need cardiac monitoring. Consultation is available 24 hours a day from all medical and surgical subspecialties available at SCVMC including neurosurgery, neurology, ENT, ophthalmology, infectious diseases, and urology.

XI. SEXUALITY, SEXUAL FUNCTION, AND INTIMACY

Sexuality and intimacy are addressed with patients and partners by the physician and rehab psychologists in private. Educational literature is available. Positioning concerns can be addressed by OT. Medications can be prescribed by the physician and private opportunities for sexual intimacy can be provided with medication trials before discharge. Intimate partner violence concerns are addressed by social worker.

XII. FERTILITY

Fertility potential and treatment options are discussed with the patients and partners by physicians and specialists in private and via educational literature. Patients are referred to community specialists for ongoing care in fertility treatment.

XIII. SKIN INTEGRITY

Preadmission screening identifies existing skin breakdown and wounds. Admission assessment verifies the accuracy of preadmission screening. Nursing performs daily skin checks or breakdown and wounds, identification of patients at high risk for skin breakdown, patient and family education for prevention and treatment. Wound RN consultation is available. Medications for treatment are ordered by physician. PT and OT monitor skin integrity closely when applying casts, splints, and provide input with seating, positioning, and adaptive equipment to promote skin integrity.

Mobility tasks are evaluated to determine if skin shearing is possible. Activities may be restricted or modified based upon skin condition. Appropriate beds/mattresses are provided based upon skin issues. Registered dietician gives input regarding protein, calorie, and mineral/vitamin supplementation for skin healing.

XIV. RESPIRATORY HEALTH

Patients who have respiratory impairments from SCI are assessed and monitored closely by the physician, respiratory therapist, and nursing. Respiratory therapists are available 24 hours a day and appropriate treatments are scheduled. When indicated, patients and caregivers are trained in respiratory equipment, assisted coughing, ventilation management, tracheostomy care, and positioning to maximize their respiratory function.

XV. PAIN

Pain is assessed on every shift to identify the source and intensity. The patient, physician, rehab nurse, OT, PT, and rehab psychologist manage pain in a multidisciplinary approach which may include medications, injections, physical modalities, positioning, seating, biofeedback, and psycho-therapeutic techniques such as the use of imagery and relaxation techniques.

XVI. ACTIVITIES OF DAILY LIVING

OT and PT provide assessment and training for participation in activities of daily living appropriate for each level of SCI. When indicated, assistive technologies (including electronic devices) and orthotic/prosthetic devices are utilized with training and prescription for the use of the devices prior to discharge.

XVII. ASSISTIVE TECHNOLOGY AND ENVIRONMENTAL MODIFICATIONS

Patients are provided opportunities for assistive technology including computer, phone, speech generating devices, iPad, and smart homes. Recommendations for assistive technology devices are provided by OT and SLP. Home assessments are completed with cooperation from the patient and caregivers and home modification recommendations are provided.

XVIII. DURABLE MEDICAL EQUIPMENT

OT and PT assess for the patient's durable equipment needs based on functional abilities. Therapists work with the patients and caregivers to provide the necessary equipment and training with the equipment for maximal independence. Assistance is provided with understanding and anticipation of the insurance authorization process. A variety of equipment may be recommended including wheelchairs, ambulation devices, standing frames, hospital beds, and bathroom equipment. When wheeled mobility is needed, the OT assists with ordering, modification, proper seating and postural support, and training in all settings that the patient might encounter.

XIX. HEALTH PROMOTION AND PREVENTIVE SERVICES

On admission, rehab nurse and physician assess need of Flu and Pneumovax vaccinations. Universal precautions are practiced in the hospital. Patient and family teaching regarding best hygiene practices is completed by the rehab nurse. Children visitors under 14 years of age are screened for illness prior to visitation which is permitted in the dayroom rather than patient rooms.

All patients are screened for infections in times of epidemic. TB screening is performed upon request prior to placement in another facility. MRSA screening is routinely performed on patients admitted from another facility, and is repeated during their stay if applicable. Nursing monitors vitals and skin on a daily basis. Routine admission laboratory tests may detect common medical conditions.

Patient education classes and individualized teaching are performed by all interdisciplinary team members. Consultations by diabetic nurse educator, wound/ostomy clinical nurse specialist, and dietician are available. Community referrals are made to smoking cessation programs, drug and alcohol treatment, mental health treatment, support groups, senior nutrition site, exercise programs, and adaptive PE classes. Life-long follow up available for those patients residing in our community. Information is provided specific to each patient's identified needs as they age with SCI.

XX. COMMUNITY INTEGRATION/LEISURE/RECREATION

Opportunities are available for patients to identify and participate in leisure activities in both individual and group activities. Community integration activities are provided by interdisciplinary staff throughout the patient's stay. Patient education and practice is provided in community accessibility and barrier management. Leisure exploration is offered in group and individual sessions. Personal preferences and previous recreation/leisure activities guide the activity choices and opportunities.

XXI. DRIVING

The physician and OT assess the patient's potential to return to driving. If appropriate, referrals are made to community resources for driving assessment and training. Educational material is provided on California laws and requirements, community resources for assessment, and attendant van options.

XXII. RESOURCE MANAGEMENT

Resources are provided in a variety of areas including but not limited to peer support services, personal care assistants, social program qualifications and application assistance, case management services, independent community living centers referral, emergency preparedness, and safety in the environment in which they participate.