ACGME Common Program Requirements Appear in Bold

Policies and Procedures for Residency Education
in the Subspecialties of Physical Medicine and Rehabilitation

A. The initial application for a subspecialty program will not require an on-site survey, but will require submission of all application materials and information signed by the director of the subspecialty program and the director of the accredited sponsoring program in a relevant core specialty such as anesthesiology, emergency medicine, family practice, internal medicine, neurological surgery, neurology, orthopaedic surgery, pediatrics, physical medicine and rehabilitation, plastic surgery, surgery, or urology. The Residency Review Committee for Physical Medicine and Rehabilitation (RRC) will take initial action based on a "paper review" of the program, namely, a review without survey.

B. Subsequent review of subspecialty programs will be in conjunction with the survey and review of the core program. A separate set of forms will have to be completed by the subspecialty program director. In special cases determined by the RRC, the subspecialty program will be surveyed and reviewed separately. The RRC will also entertain interim requests and, on occasion, ask for interim progress reports.

C. The Residency Review Committee will designate programs as being accredited or not accredited. No further delineation of accreditation categories will be utilized. The accreditation of a program will be directly tied to that of the core. If the core program is subsequently accredited on a probationary basis, this is simultaneously a warning to the related subspecialty program that accreditation is in jeopardy. Withdrawal of accreditation of the core program will result in a simultaneous loss of accreditation of the subspecialty program.

D. If the core program remains in good standing but the RRC judges the subspecialty program to be in noncompliance with the applicable program requirements, a warning will be issued. If these areas of noncompliance are not corrected, accreditation may be withdrawn from the subspecialty program. The Procedures for Proposed Adverse Action and for Appeal of Adverse Actions may be utilized by programs from which the accreditation has been withdrawn in an action separate from withdrawal of accreditation of the core program.

E. Inquiries about accreditation of subspecialty programs should be directed to the Executive Secretary of the Residency Review Committee for Physical Medicine and Rehabilitation.

Program Requirements for Residency Training in Spinal Cord Injury Medicine (SCIM)

Preface

The program requirements set forth here are to be considered common to all specialties, and are complete only when supplemented, where indicated and individually, by each specialty.

I. Introduction

A. Definition

1. Spinal Cord Injury Medicine (SCIM) addresses the prevention, diagnosis, treatment and management of traumatic spinal cord injury (SCI) and nontraumatic myelopathies, including the prevention, diagnosis and treatment of related medical, physical, psychosocial and vocational disabilities and complications during the lifetime of the patient.

2. The management of persons with spinal cord dysfunction (SCD) requires a team and interspecialty approach with contributions from several medical and surgical specialties as well as other health care professionals. The specialist in SCIM should serve as the team leader after the patient is medically and surgically stabilized. When the spinal dysfunction is due to an active process or a chronic degenerative disorder, the management of the patient=s primary disease is the responsibility of a physician in the appropriate discipline.

B. Duration and Scope of Education

1. Training in SCIM shall be 12 months in duration beginning after satisfactory completion of an approved residency program in a specialty relevant to spinal cord injury medicine, such as anesthesiology, emergency medicine, family practice, internal medicine, neurological surgery, neurology, orthopaedic surgery, pediatrics, physical medicine and rehabilitation, plastic surgery, surgery, or urology.

2. The program must provide for individuals to acquire, within the interdisciplinary spinal cord injury team, knowledge of emergency care and knowledge and skills in the following areas:

a) post-initial care,

b) initial and ongoing medical rehabilitation,

c) discharge planning,

d) lifelong care, and

e) scholarly activity in support of these skills.

3. Any program that extends training beyond the 12-month minimum requirement must present a clear educational rationale consonant with the program requirements and objectives for subspecialty training. The program director must obtain approval of the Residency Review Committee (RRC) prior to implementation and at each subsequent review of the program. Prior to entry in the program, each resident must be notified in writing of the required length of training.

II. Institutions

A. Sponsoring Institution

One sponsoring institution must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this responsibility extends to resident assignments at all participating institutions.

1. The institution sponsoring the SCIM program must be a center for care of persons with spinal cord dysfunction or affiliated with such a center. Affiliation with an accredited medical school is desirable. The institution should be accredited by the Joint Commission on Accreditation of Health Care Organizations-Rehabilitation Section (JCAHO-Rehab) or the Commission on Accreditation of Rehabilitation Facilities (CARF).

2. Accreditation of a subspecialty program in SCIM will be granted only when the program is administratively attached to an ACGME-accredited residency program in a relevant specialty.

3. There must be close cooperation between the core residency training program and the subspecialty program. The lines of responsibility between resident staffs in the core program and the subspecialty program must be clearly delineated.

4. The sponsoring institution should exercise the necessary administrative management of the training program.

5. There should be an institutional policy, reviewed at the time of regular institutional or internal review, governing the educational resources committed to the SCIM program assuring cooperation of all involved disciplines.

6. The institution must provide for financial resources including, but not limited to, salaries, fringe benefits and opportunities for continuing medical education for residents.

B. Participating Institutions

1. Assignment to an institution must be based on a clear educational rationale, integral to the program curriculum, with clearly-stated activities and objectives. When multiple participating institutions are used, there should be assurance of the continuity of the educational experience.

2. Assignment to a participating institution requires a letter of agreement with the sponsoring institution. Such a letter of agreement should:

a) identify the faculty who will assume both educational and supervisory responsibilities for residents;

b) specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified later in this document;

c) specify the duration and content of the educational experience; and

d) state the policies and procedures that will govern resident education during the assignment.

3. It is highly desirable for participating institutions to be in the same geographic location and conveniently and safely accessible to residents.

III. Program Personnel and Resources

A. Program Director

1. There must be a single program director responsible for the program. The person designated with this authority is accountable for the operation of the program. In the event of a change of either program director or department chair, the

program director should promptly notify the executive director of the Residency Review Committee (RRC) through the Web Accreditation Data System of the Accreditation Council for Graduate Medical Education (ACGME).

2. The program director, together with the faculty, is responsible for the general administration of the program, including those activities related to the recruitment, selection, instruction, supervision, counseling, evaluation, advancement of residents and the maintenance of records related to program accreditation, and for the establishment and maintenance of a stable educational environment. Adequate lengths of appointment for both the program director and faculty are essential to maintaining such an appropriate continuity of leadership.

3. Qualifications of the program director are as follows:

a) The program director must possess the requisite specialty expertise, as well as documented educational and administrative abilities.

b) The program director must be certified in the specialty by the American Board of Physical Medicine and Rehabilitation in Spinal Cord Injury Medicine**, or possess qualifications judged to be acceptable by the RRC.** Board certification in a specialty or subspecialty related to the care of persons with spinal cord dysfunction and subspecialty certification in SCIM or suitable equivalent qualifications.

c) The program director must be appointed in good standing and based at the primary teaching site.

d) The program director must have documented qualifications as a clinician, administrator and educator in the field of SCIM.

e) The program director must have licensure to practice medicine in the state where the institution that sponsors the program is located. (Certain federal programs are exempted.)

4. Responsibilities of the program director are as follows:

a) **The program director must oversee and organize the activities of the educational program in all institutions that participate in the program. This includes selecting and supervising the faculty and other program personnel at each participating institution, appointing a local site director, and monitoring appropriate resident supervision at all participating institutions.**

b) **The program director is responsible for preparing an accurate statistical and narrative description of the program as requested by the RRC, as well as updating annually both program and resident records through the ACGME's Accreditation Data System.** Adequate data collection and analysis is necessary for all program evaluation and total quality management. The program director should gather, analyze and maintain data regarding resident and faculty performance.

c) **The program director must ensure the implementation of fair policies, grievance procedures, and due process, as established by the sponsoring institution** regarding academic discipline and resident complaints or grievances **and in compliance with the Institutional Requirements.**

d) **The program must seek the prior approval of the RRC for any changes in the program that may significantly alter the educational experience of the residents. Such changes, for example, include:**

(1) **the addition or deletion of a participating institution;**

(2) **a change in the format of the educational program;**

(3) **a change in the approved resident complement for those specialties that approve resident complement.**

On review of a proposal for any such major change in a program, the RRC may determine that a site visit is necessary.

e) The program director must have sufficient time devoted to provide continuous leadership to the program as well as supervision of the residents.

f) The program director must actively participate in research and scholarly activities in SCIM.

g) The program director is responsible for selection of residents for appointment to and assignment in the program in accordance with institutional and departmental policies and procedures.

h) The program director is responsible for selection and supervision of the teaching staff and other program personnel at each institution participating in the program. The program director should assign faculty and perform annual evaluations of their performance.

i) The program director is responsible for the supervision of residents through explicit written descriptions of supervisory lines of responsibility for the care of patients. Such guidelines must be communicated to all members of the program staff. Residents must be provided with prompt, reliable systems for communication and interaction with supervisory physicians.

j) The program director is responsible for regular evaluation of the resident's knowledge, skills, and competence, including the development of professional attitudes consistent with being a physician.

The program director, with participation of members of the teaching staff, shall:

(1) At least semi-annually evaluate the knowledge, skills, competence and professional growth of the resident, using appropriate criteria and procedures.

(2) Communicate each evaluation to the resident in a timely manner.

(3) Advance residents to positions of higher responsibility only on the basis of evidence of their satisfactory progressive scholarship and professional growth.

(4) Maintain a permanent record of evaluation for each resident and have it accessible to the resident and other authorized personnel.

k. The program director is responsible for monitoring resident stress, including mental or emotional conditions inhibiting performance or learning, and drug or alcohol-related dysfunction. Program directors and teaching staff should be sensitive to the need for timely provision of confidential counseling and psychological support services to residents. Training situations which consistently produce undesirable stress on residents must be evaluated and modified.

l. The program director is responsible for gathering and analyzing initial, discharge and follow-up data regarding the functional outcomes of persons served.

m. The program director is responsible for notification to the RRC of major programmatic changes. The RRC must be notified immediately of any change in program directorship.

B. Faculty

1. At each participating institution, there must be a sufficient number of faculty with documented qualifications to instruct and supervise adequately all residents in the program.

2. The faculty, furthermore, must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities. They must demonstrate a strong interest in the education of residents, sound clinical and teaching abilities in the field of SCIM, a commitment to their own continuing medical education, and participation in scholarly activities **and must support the goals and objectives of the educational program of which they are a member.** The faculty should participate in teaching, research and scholarly activity in the field of SCIM.

3. Qualifications of the physician faculty are as follows:

a) The physician faculty must possess the requisite specialty expertise and competence in clinical care and teaching abilities, as well as documented educational and administrative abilities and experience in their field.

b) The physician faculty must be certified in the specialty by the American Board of Physical Medicine and Rehabilitation in Spinal Cord Injury Medicine**, or possess qualifications judged to be acceptable by the RRC.**

c) The physician faculty must be appointed in good standing to the staff of an institution participating in the program.

4. Graduate medical education must take place in an environment of inquiry and scholarship in which resident participate in the development of new knowledge, learn to evaluate research findings, and develop habits of inquiry as a continuing professional responsibility. **The responsibility for establishing and maintaining an environment of inquiry and scholarship rests with the faculty, and an active research component must be included in each program.** While not all members of a teaching staff must be investigators, the staff as a whole must demonstrate broad involvement in scholarly activity. ***Scholarship*** **is defined as the following:**

a) the scholarship of *discovery*, as evidenced by peer-reviewed funding or by publication of original research in a peer-reviewed journal;

b) the scholarship of *dissemination*, as evidenced by review articles or chapters in textbooks;

c) the scholarship of *application*, as evidenced by the publication or presentation of, for example, case reports or clinical series at local, regional, or national professional and scientific society meetings.

Complementary to the above scholarship is the regular participation of the teaching staff in clinical discussions, rounds, journal clubs, and research conferences in a manner that promotes a spirit of inquiry and scholarship (e.g., the offering of guidance and technical support for residents involved in research such as research design and statistical analysis); and the provision of support for residents' participation, as appropriate, in scholarly activities. Scholarship implies an in-depth understanding of basic mechanisms of normal and abnormal states and the application of current knowledge to practice. The resident should have assigned time to conduct research or other scholarly activities. The goal for the resident should be at least one scientific presentation, abstract or publication.

5. Qualifications of the nonphysician faculty are as follows:

a) Nonphysician faculty must be appropriately qualified in their field.

b) Nonphysician faculty must possess appropriate institutional appointments.

6. In addition to the program director, there must be at least one other faculty member with expertise in SCIM who is dedicated to the program.

7. The faculty should be Board certified in a specialty or subspecialty related to the care of persons with spinal cord dysfunction or possess suitable equivalent qualifications.

8. A member of the teaching staff of each participating institution must be designated to assume responsibility for the day-to-day activities of the program at that institution, with overall coordination by the program director.

9. The teaching staff must be organized and have regular documented meetings in order to review program goals and objectives as well as program effectiveness in achieving them. At least one resident representative should participate in these reviews.

10. The teaching staff should periodically evaluate the utilization of the resources available to the program, the contribution of each institution participating in the program, the financial and administrative support of the program, the volume and variety of patients available to the program for educational purposes, the performance of members of the teaching staff, and the quality of supervision of residents.

C. Other Program Personnel

Additional necessary professional, technical, and clerical personnel must be provided to support the program.

D. Facilities and **Resources**

The program must ensure that adequate resources (e.g., sufficient laboratory space and equipment, computer and statistical consultation services) are available.

1. Institutional Facilities

   Education in SCIM should include experience in both inpatient and outpatient facilities. The sponsoring and participating institutions must operate or have access to a service delivery system dedicated to the care of persons with spinal cord dysfunction. Necessary resources include:

   a) an emergency department that treats patients with spinal cord injury,

   b) an accredited acute care hospital,

   c) a dedicated inpatient rehabilitation unit,

   d) a designated outpatient clinic for persons with spinal cord dysfunction, and

   e) availability of home care and independent living programs.

2. Specific Facilities and Resources

   a) The sponsoring institution must have available the equipment, diagnostic imaging devices, electrodiagnostic devices, laboratory services, a urodynamic laboratory, and clinical facilities necessary to provide appropriate care to persons with spinal cord dysfunction. Medical library facilities and facilities for teaching experiences must be available, along with a medical records system that allows for efficient case retrieval.

   b) The sponsoring institutions must have available specialty consultant services in anesthesia, emergency medicine, family practice, internal medicine (including the relevant subspecialties), neurological surgery, neurology, orthopedic surgery, pathology, pediatrics, physical medicine and rehabilitation, plastic surgery, psychiatry, radiology, surgery, and urology. Other health care professionals are essential to the care of persons with spinal cord dysfunction.

3. Library

   a) Residents must have ready access to a major medical library either at the institution where the residents are located or through arrangement with convenient nearby institutions.

b) Residents must have regular access, including nights and weekends, to computer and audiovisual capabilities and electronic retrieval of information from medical databases.

c) There must be access to an on-site library or to a collection of appropriate texts and journals in each institution participating in a residency program. On-site libraries and/or collections of texts and journals must be readily available during nights and weekends.

4. Patient Population

The patient population must be of sufficient size and diversity of age so as to provide the resident with the opportunity to care for an adequate number of persons with new spinal cord dysfunction, to care for persons re-admitted to the hospital with intercurrent illness, and to care for appropriate numbers of outpatients. There should be a minimum census of eight (8) patients per resident.

IV. Resident Appointments

A. Eligibility Criteria

The program director must comply with the criteria for resident eligibility as specified in the Institutional Requirements.

The program shall establish written policies and procedures regarding selection and appointment of residents. The resident complement should be appropriate to the available clinical and educational resources, including faculty. It is highly desirable to have at least one resident in the program at all times.

B. Number of Residents

The RRC will approve the number of residents based upon established written criteria that include the adequacy of resources for resident education (e.g., the quality and volume of patients and related clinical material available for education), faculty-resident ratio, institutional funding, and the quality of faculty teaching.

The program shall have and implement written policies and procedures, based on the educational resources available, for determining the number of resident positions.

C. Resident Transfers

To determine the appropriate level of education for residents who are transferring from another residency program, the program director must receive written verification of previous educational experiences and a statement regarding the performance evaluation of the transferring resident prior to their acceptance into the program. A program director is required to provide verification of residency education for residents who may leave the program prior to completion of their education.

The program shall have and implement written policies and procedures, based on the educational resources available, regarding change in resident complement or filling vacant positions.

D. Appointment of Fellows and Other Students

The appointment of fellows and other specialty residents or students must not dilute or detract from the educational opportunities available to regularly appointed residents.

The applicant must be licensed for unrestricted practice in a state or province of the United States or Canada.

V. Program Curriculum

The director and teaching staff of a program must prepare and comply with written educational goals for the program.

A. Program Design

All educational components of a residency program should be related to program goals.

1. Format

The program design and sequencing of educational experiences will be approved by the RRC as part of the review process.

Participation by any institution providing more than three months of training must be approved by the RRC.

2. Goals and Objectives

The program must possess a written statement that outlines its educational goals with respect to the knowledge, skills, and other attributes of residents for each major assignment and for each level of the program. This statement must be distributed to residents and faculty, and must be reviewed with residents prior to their assignments.

a) Goals: An approved subspecialty program must be designed to provide an educational experience to ensure that its graduates possess the advanced knowledge and competencies necessary to practice this subspecialty.

b) Objectives: The program must provide the resident opportunities to develop a unique set of attitudes, knowledge and psychomotor skills because SCD affects multiple organ systems of the body, and its treatment involves many specialty areas of expertise. The resident must be given the opportunity to gain knowledge of:

(1) the impact of SCD on the various organ systems,

(2) the natural history, pharmacologic management and evolution of organ system functioning after SCD and the interaction among the various organ systems,

(3) the impact of aging and longstanding injury on organ system decline.

(4) the prevention and treatment of secondary complications of SCD, and

(5) the maximal functions possible based on the characteristics and level of SCD and how to achieve them.

c) The resident must be given the opportunity to become proficient in:

(1) coordination in the post-initial care setting of the impact and timing of treatment of each organ system's dysfunction so that an optimum treatment effect can be obtained,

(2) planning of the most efficient and effective treatment approaches for acquisition of skills and knowledge by the patient in order to acquire the highest level of functioning, and

(3) promotion of patient education about all aspects of SCD in order to promote patient independence and patient recognition of illness.

The program must prepare the person trained as a SCIM specialist to implement, over the course of the individual patient's lifetime, a health maintenance and disease prevention program with early recognition and effective treatment of complications related to SCD, and must promote awareness of the impact of aging on SCD.

B. Specialty Curriculum

The program must possess a well-organized and effective curriculum, both didactic and clinical. The curriculum must also provide residents with direct experience in progressive responsibility for patient management.

C. Residents Scholarly Activities

Each program must provide an opportunity for residents to participate in research or other scholarly activities, and residents must participate actively in such scholarly activities.

D. ACGME Competencies

(N.B.: Section V. D. does not apply to certain subspecialties)

The residency program must require its residents to obtain competence in the six areas listed below to the level expected of a new practitioner. Programs must define the specific knowledge, skills, behaviors, and attitudes required, and provide educational experiences as needed in order for their residents to demonstrate the following:

1. *Patient care* that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health;

2. *Medical Knowledge* about established and evolving biomedical, clinical, and cognate sciences, as well as the application of this knowledge to patient care;

3. *Practice-based learning and improvement* that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care;

4. *Interpersonal and communication skills* that result in the effective exchange of information and collaboration with patients, their families, and other health professionals;

5. *Professionalism*, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds;

6. *Systems-based practice*, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

E. Clinical Components

1. The clinical portion of the curriculum must include a sufficient variety, depth and volume of clinical experiences. The educational program should take into consideration the resident's documented past educational and patient care experiences. The training program must provide for the resident to spend a significant amount of time in responsibility for the direct care of hospitalized as well as non-hospitalized patients. Residents must devote at least 1/3 of their clinical experience to the care of hospitalized patients and at least 1/3 to non-hospitalized patients.

2. The educational program must be designed for the resident to attain the following knowledge and competencies within the interspecialty and interdisciplinary care team:

    a) Initial Care

        (1) Understand the organization and interdisciplinary practices of the Emergency Medical Services system relating to the prehospital and initial Emergency Department care of the spinal cord injured as well as concomitant and associated injuries. This is not

meant to interfere with the independent decision making of the attending physician during the initial care.

(2) Understand the techniques of appropriate spinal immobilization in order to protect patients from additional neurological damage.

(3) Be able to perform a comprehensive neurologic assessment and determine the appropriate injury level of the patient.

(4) Understand the supportive role of SCIM to neurological surgery, orthopedic surgery, emergency medicine, and other appropriate physicians in initial care sites, including intensive and critical care units.

(5) Understand and assist in the management of the abnormalities and complications in other body systems resulting from spinal cord injury, especially the following: pulmonary, genitourinary, endocrine, metabolic, vascular, cardiac, gastrointestinal, musculoskeletal and integumentary.

b) Post-Initial Care

(1) Understand how the stability of the spine is evaluated and know the various options for treatment of fractures/ dislocations at all vertebral levels.

(2) Understand the optimal coordination of services of the various physicians and other health professionals in the prevention and treatment of complications in each organ system.

(3) Develop the skills to initiate and direct appropriate rehabilitation programming in the early hospital phase of treatment.

(4) Understand the relationship between the extent and level of spinal cord injury on the ultimate residual functional capacity and be able to inform and counsel the patient, the family, and other health specialists on a timely basis about the impact of the disability.

(5) Understand special needs and problems that children and adolescents with spinal cord injury may have in areas such as behavior, bladder and bowel and skin care, growth and development, immunizations, mobility, nutrition, pediatrics, self-care, recreation and schooling through lectures and appropriate clinical assignments under the integrated services of pediatricians and specialists in SCIM. Also understand the special needs of parents and others in relating to and assisting young patients with these problems.

c) Initial and Ongoing Medical Rehabilitation

(1) Coordinate the transition from post-initial care to rehabilitation and assume primary management responsibility.

(2) Establish short and long term rehabilitation goals and coordinate the implementation of the rehabilitation program to meet such goals.

(3) Monitor the evolution of neural dysfunction in order to recognize conditions that may require additional evaluation, consultation, or modification of treatment.

(4) After post-initial care, in conjunction with the interspecialty spinal cord injury team, participate in the management of spinal cord injury following either operative or nonoperative stabilization, including activity restrictions and appropriate orthotic support.

(5) Understand the collaborative role of integral members of the SCI care team.

(6) Recognize, diagnose and coordinate treatment for respiratory complications such as tracheostomies, airway obstruction, atelectasis, pneumonia, tracheal stenosis, mechanical methods of respiration including both fixed and portable equipment. The resident should be able to manage patients with high quadriplegia and respirator- dependent patients, in weaning the patient from the respirator, and in evaluating indications and contraindications of phrenic nerve pacing, motorized wheelchairs, portable

respirators, environmental control systems, home modifications, etc.

(7) Recognize, diagnose and treat orthostatic hypotension and other cardiovascular abnormalities during initial mobilization of the patient.

(8) Evaluate and manage skin problems utilizing various techniques of prevention such as the proper use of specialized beds, other surfaces, cushions, wheelchairs, etc., to manage pressure ulcers effectively; and, in consultation with surgical colleagues, determine the indications for various surgical procedures including resection of bone and the development of flaps and other techniques for soft tissue coverage. The resident should also develop an understanding of the pre- and post-operative management of these patients.

(9) With appropriate consultation, identify the risk of infection and coordinate treatment and infection control including the judicious use of antimicrobials.

(10) Coordinate and implement management of the neurogenic bowel.

(11) Understand management of the neurogenic bladder and sexual dysfunction and that the role of the urologist is pivotal in the diagnosis and management of bladder dysfunction, urinary tract infection, urinary calculi, sexual dysfunction, obstructive uropathy with or without stones, infertility and problems of ejaculation; and that such specialists should be utilized early in the care of these patients.

(12) Diagnose and treat, with appropriate consultation, complications such as deep vein thrombosis, pulmonary embolus, autonomic hyperreflexia, substance abuse, pain, spasticity, depression, and the sequelae of associated illnesses and pre-existing diseases.

(13) Recognize pharmacologic alterations associated with spinal cord injury, including changes in pharmacokinetics, pharmacodynamics, drug interactions, over-medication, and compliance.

(14) Diagnose and manage the psychological dysfunction associated with spinal cord injury.

(15) Perform a functional assessment based on neurological, musculoskeletal and cardiopulmonary examinations and psychosocial and prevocational evaluations.

(16) Determine functional goals for self-care, mobility, vocational and avocational activities based on the level and completeness of the lesion.

(17) (If appropriate, prescribe motor retraining and conditioning activities, orthoses, and the adaptive equipment needed to meet the rehabilitation goals.

(18) Anticipate the approximate length of stay, cost of hospitalization, equipment needs, etc., with the involvement of the patient, the patient's support persons and appropriate agencies.

(19) Identify the indications for and the use of clinical neurophysiologic testing to assess the extent of neuropraxia, denervation, reinnervation, phrenic nerve function, and spinal cord function.

(20) Identify the indications and use of functional electrical stimulation (FES) as applied to the management of spinal cord impairment.

(21) Understand the kinesiology of upper extremity function and the use of muscle substitution patterns in retraining; the value, indications and contraindications of tendon and muscle transfers and other operative procedures that would enhance function.

(22) Within the interdisciplinary and interspecialty spinal cord injury teams, understand the concepts of muscle and tendon transfers, and of other operative procedures that enhance extremity function, and manage the post-operative retraining, when indicated.

(23) Prescribe appropriate motor vehicle modifications to promote independence in mobility and transportation.

(24) Understand group process and team dynamics, and coordinate the activities of the interdisciplinary team through daily rounds, staff conferences, patient and family educational and training sessions in order to maximize the goals established by the patient and team.

(25) Understand the training and capabilities of rehabilitation nurses, social workers, psychologists, physical therapists, occupational therapists, prosthetists, orthetists, speech/language pathologists and recreational and vocational counselors; recognize the professional role and contributions of the various allied health professions individually and collectively; encourage their full participation in patient care management while maintaining medical responsibility; and appreciate that a team effort, with as much continuity as practical, will produce a more satisfying outcome and experience for the patient, family and team members.

(26) Conduct a problem-oriented conference and set goals with the participation of the allied health staff.

d) Discharge Planning

(1) Determine when the rehabilitation goals have been achieved, finalize the discharge plan, and arrange for the appropriate level of care to match the patient's needs.

(2) Participate in family meetings/discharge planning conferences, with focus upon community integration and adjustment to disability.

(3) Organize and conduct programs of patient and family education.

(4) In concert with appropriate disciplines and other team members, manage the psychological effects of the impairment in order to prevent their interference with the reintegration and re-entry to the community.

(5) Use the full range of community resources to facilitate the transition to the community.

(6) Understand the needs for personal care attendants, architectural modifications, and community follow-up care.

e) Follow-Up Phase - Sustaining Care

(1) Recognize, diagnose and treat intercurrent disease in conjunction with the proper consultants. There should be special emphasis on the prevention and management of these diseases in patients at various levels of spinal cord injury.

(2) Diagnose and coordinate the treatment of the complications associated with chronic spinal cord injury including pressure sores, spasticity, pain, urinary calculi, urinary tract infection, fractures, post-traumatic syringomyelia, and progressive respiratory decline.

(3) Set up a program of regular follow-up, evaluation and preventive health care to keep the person at his/her maximum health and rehabilitation status, and coordinate this care with the patient's personal community physician.

(4) Direct to or establish the patient in a program of vocational rehabilitation, if appropriate.

(5) Appreciate the ultimate goal is to return and maintain the person with spinal cord injury as a satisfied, and productive member of society.

(6) Understand the prevention and management of complications associated with longstanding disability, the effects of aging with a disability and the provision of long-term follow-up services.

(7) Coordinate and manage a SCI home care program.

(8) Develop and maintain as needed a professional relationship with primary care physicians and be available to assist with or provide primary care for needed follow-up examination and for complex issues of SCI care.

(9) In all phases of care, understand and define the ethical and legal issues especially pertinent to spinal cord injury including diminished competence and the right to refuse treatment.

3. The program should be designed so that the resident has an opportunity to follow individual patients longitudinally as well as the ability to encounter a wide variety of patient problems.

4. The program should be designed so that the resident has an opportunity to develop a management style compatible with the interdisciplinary team process.

F. Didactic Components

1. Basic science content. There should be a didactic curriculum taught by faculty and a self-directed learning program to address the theoretical and clinical principles which form the fundamentals for care of patients with spinal cord dysfunction. Pathophysiology, discussion and knowledge of clinical manifestations and management principles about the care of such patients should constitute the major topics for study.

2. Specialty content. Specialists in anesthesiology, emergency medicine, internal medicine (including the relevant subspecialties), neurology, neurosurgery, orthopedic surgery, pediatrics, physical medicine and rehabilitation, plastic surgery, psychiatry, radiology, surgery, and urology should take an active role in the didactic curriculum, providing instruction in the areas of their practices relevant to spinal cord dysfunction.

3. Conferences

a) Required conferences should include case oriented multidisciplinary conferences, journal club, and quality management seminars relevant to clinical care on the spinal cord program.

b) Conferences must be of sufficient quality and frequency to provide in-depth coverage of the major topics in spinal cord injury medicine over one year.

c) There must be documentation of staff and resident attendance.

d) Educational activities must be carried out under the direct supervision of faculty members.

G. Other Program Components

1. Management. Within the interspecialty and interdisciplinary SCIM care, team the resident should be taught, understand and apply principles of organizational and group behavior, leadership and management styles, evaluation and modification of performance, labor-management issues, cost accounting and containment, and quality assurance techniques. The resident should gain an understanding and some proficiency in the areas of budget planning and presentation, preparation of management briefings, information systems, and external reviews such as the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) and the Commission on Accreditation of Rehabilitation Facilities (CARF).

2. Teaching by the resident. The resident should have the opportunity to

a) Teach local medical communities and the general public about prevention of spinal cord injury;

b) teach prehospital personnel and other health care providers how to stabilize patients with spinal cord injury and institute a rational protocol for their prehospital care;

c) teach other hospital personnel and health care providers, patients, and patient support systems about the rehabilitation needs and long-term care of patients with spinal cord injury;

d) teach medical students, medical residents and other health professionals;

e) understand and utilize learning theory, including assessment of learning needs, development of objectives and curriculum plans, effective use of audiovisual and other teaching materials and evaluation of teaching outcomes;

f) provide instruction to patients and families; and

g) to participate in educational activities within the interspecialty and interdisciplinary SCIM care team.

VI. Resident Duty Hours and the Working Environment

Providing residents with a sound didactic and clinical education must be carefully planned and balanced with concerns for patient safety and resident well-being. Each program must ensure that the learning objectives of the program are not compromised by excessive reliance on residents to fulfill service obligations. Didactic and clinical education must have priority in the allotment of residents' time and energy. Duty hour assignments must recognize that faculty and residents collectively have responsibility for the safety and welfare of patients.

A. Supervision of Residents

1. **All patient care must be supervised by qualified faculty. The program director must ensure, direct, and document adequate supervision of residents at all times. Residents must be provided with rapid, reliable systems for communicating with supervising faculty.**

2. **Faculty schedules must be structured to provide residents with continuous supervision and consultation.**

3. **Faculty and residents must be educated to recognize the signs of fatigue, and adopt and apply policies to prevent and counteract its potential negative effects.**

4. **The level of supervision of the residents should be determined by the program director based on formal and informal evaluations.**

5. **The program director should assign a member of the faculty as supervisor to each resident. Written objectives for each clinical rotation must be provided to the resident.**

6. **The supervisor is responsible for the educational experience according to the written plan developed at the beginning of the training. The supervisor must meet regularly with the program director and resident for appropriate monitoring and feedback.**

B. Duty Hours

1. **Duty hours are defined as all clinical and academic activities related to the residency program; i.e., patient care (both inpatient and outpatient), administrative duties relative to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled activities**

such as conferences. Duty hours do *not* include reading and preparation time spent away from the duty site.

2. **Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.**

3. **Residents must be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call. *One day* is defined as 1 continuous 24-hour period free from all clinical, educational, and administrative duties.**

4. **Adequate time for rest and personal activities must be provided. This should consist of a 10-hour time period provided between all daily duty periods and after in-house call.**

5. **While the actual number of hours worked by a subspecialty resident may vary, the resident should have sufficient off-duty time to avoid undue fatigue and stress. The resident should be allowed to spend, on average, at least 1 full day out of 7 away from the hospital, and should be assigned on-call duty in the hospital no more frequently than an average of every third night. The program director is responsible for monitoring according to written policies on-duty assignments as well as activities outside the program.**

C. On-call Activities

1. **In-house call must occur no more frequently than every third night, averaged over a 4-week period.**

2. **Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Residents may remain on duty for up to 6 additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care.**

3. **No new patients may be accepted after 24 hours of continuous duty.**

4. ***At-home call* (or *pager call*) is defined as a call taken from outside the assigned institution.**

   a) **The frequency of at-home call is not subject to the every-third- night limitation. At-home call, however, must not be so frequent as to preclude rest and**

reasonable personal time for each resident. Residents taking at-home call must be provided with 1 day in 7 completely free from all educational and clinical responsibilities, averaged over a 4-week period.

b) When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.

c) The program director and the faculty must monitor the demands of at-home call in their programs, and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.

D. Moonlighting

1. Because residency education is a full-time endeavor, the program director must ensure that moonlighting does not interfere with the ability of the resident to achieve the goals and objectives of the educational program.

2. The program director must comply with the sponsoring institution's written policies and procedures regarding moonlighting, in compliance with the ACGME Institutional Requirements.

3. Any hours a resident works for compensation at the sponsoring institution or any of the sponsor's primary clinical sites must be considered part of the 80-hour weekly limit on duty hours. This refers to the practice of *internal moonlighting*.

E. Oversight

1. Each program must have written policies and procedures consistent with the Institutional and Program Requirements for resident duty hours and the working environment. These policies must be distributed to the residents and the faculty. Duty hours must be monitored with a frequency sufficient to ensure an appropriate balance between education and service.

2. Back-up support systems must be provided when patient care responsibilities are unusually difficult or prolonged, or if unexpected circumstances create resident fatigue sufficient to jeopardize patient care.

F. Duty Hours Exceptions

An RRC may grant exceptions for up to 10% of the 80-hour limit to individual programs based on a sound educational rationale. Prior permission of the institution's GMEC, however, is required.

G. Graded Responsibility

Clinical experiences should allow for progressive responsibility with lesser degrees of supervision as the resident advances and demonstrates additional competencies. The program should be flexible but sufficiently structured to allow for such graded responsibility.

H. Peer interaction. The resident must have opportunity to meet and share experience with residents in the core program and in other specialties. It is desirable for the resident to interact with peers in primary care and relevant subspecialties. Residents should have the opportunity to teach other residents, medical students and other health care professionals.

I. Presence of other learners/fellows. Rotation to the SCIM program by residents from other specialties or subspecialties as well as medical students is desirable.

VII. Evaluation

Evaluation is an essential component of the program. The program director and faculty must have a plan that addresses the evaluation of residents, faculty, and the program. Well-designed evaluation, combined with feedback improves the program and focuses the learning process.

A. Resident

1. Formative Evaluation

The faculty must evaluate in a timely manner the residents whom they supervise. In addition, the residency program must demonstrate that it has an effective mechanism for assessing resident performance throughout the program, and for utilizing the results to improve resident performance.

a) Assessment should include the use of methods that produce an accurate assessment of residents' competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.

b) Assessment should include the regular and timely performance feedback to residents that includes at least semiannual written evaluations. Such evaluations are to be communicated to each resident in a timely manner, and maintained in a record that is accessible to each resident.

c) Assessment should include the use of assessment results, including evaluation by faculty, patients, peers, self, and other professional staff, to achieve progressive improvements in residents' competence and performance.

2. Final Evaluation

The program director must provide a final evaluation for each resident who completes the program. This evaluation must include a review of the resident's performance during the final period of education, and should verify that the resident has demonstrated sufficient professional ability to practice competently and independently. The final evaluation must be part of the resident's permanent record maintained by the institution.

3. Policy and Principles

a) Evaluation should be based on the program objectives and on the objectives of the resident's individualized program.

b) Evaluation must be carried out semi-annually and should be followed by extensive feedback to the resident. Remedial objectives may be established.

4. The following areas should be evaluated:

a) acquisition of described competencies,

b) problem-solving skills,

c) interpersonal relationship skills,

d) ability to access, retrieve, and critically evaluate the literature,

e) information management,

f) quality and cost-effectiveness measures of patient care, and

g) research and other scholarly accomplishments.

B. Faculty

The performance of the faculty must be evaluated by the program no less frequently than at the midpoint of the accreditation cycle, and again prior to the next site visit. The evaluations should include a review of their teaching abilities, commitment to the educational program, clinical knowledge, and scholarly activities. This evaluation must include annual written confidential evaluations by residents.

1. Faculty evaluation by residents should be on a semi-annual basis.

2. Areas to be evaluated are:

   a) clinical skills and competencies,

   b) teaching skills,

   c) scholarly activity,

   d) leadership skills, and

   e) interpersonal skills.

C. Program

The educational effectiveness of a program must be evaluated at least annually in a systematic manner. In particular, the quality of the curriculum and the extent to which the educational goals have been met by the residents must be assessed. Written, confidential evaluations by residents should be utilized in this process. Resident satisfaction at the completion of training should also be assessed.

1. Representative program personnel (i.e., at least the program director, representative faculty, and one resident) must be organized to review program goals and objectives, and the effectiveness with which they are achieved. This group must conduct a formal documented meeting at least annually for this purpose. In the evaluation process, the group must take into consideration written comments from the faculty, the most recent report of the GMEC of the sponsoring institution,

and the residents' confidential written evaluations. If deficiencies are found, the group should prepare an explicit plan of action, which should be approved by the faculty and documented in the minutes of the meeting.

2. The program should use resident performance and outcome assessment in its evaluation of the educational effectiveness of the residency program. Performance of program graduates on the certification examination should be used as one measure of evaluating program effectiveness. The program should maintain a process for using assessment results together with other program evaluation results to improve the residency program.

3. One measure of the quality of a program is the performance of its residents on the examinations of the American Board of Physical Medicine and Rehabilitation for special qualifications in SCIM.

VIII. Experimentation and Innovation

Since responsible innovation and experimentation are essential to improving professional education, experimental projects along sound educational principles are encouraged. Requests for experimentation or innovative projects that may deviate from the program requirements must be approved in advance by the RRC, and must include the educational rationale and method of evaluation. The sponsoring institution and program are jointly responsible for the quality of education offered to residents for the duration of such a project.

IX. Certification

Residents who plan to seek certification by the American Board of Physical Medicine and Rehabilitation in Spinal Cord Injury Medicine **should communicate with the** Executive Director of the **office of the board regarding the full requirements for certification** to ascertain the current requirements for acceptance as a candidate for certification.

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