Learning Objectives

At the end of this chapter, you will be able to:

- Recognize the importance of team-based care in spinal cord injury (SCI) management
- Identify the role and responsibilities of the individual team members within the team
- Illustrate the concept of team-based patient care in SCI
- Analyze the importance of team dynamics and communication and how to utilize these to improve team-based care in SCI
- Summarize the characteristics of a good team as well as the barriers to its formation
- Conclude that the role of multidisciplinary team which starts from acute phase, continues into rehabilitation phase, and later on into the transition onto community living

INTRODUCTION

Comprehensive management plays an important role in enhancing outcomes leading to functional independence for people who have suffered a spinal cord injury (SCI). To achieve effective and comprehensive management in such a complex set of impairments and functional losses as occurs following SCI, a diverse range of health professionals need to work together to provide an overall health care continuum from prehospital management through the acute treatment phase, inpatient rehabilitation, and posthospital programs. Reliance on multifaceted team-based care enables an evolving health care system to address the changing patient needs with regard to physical, psychological, and social aspects of health.

A team is capable of achieving results with patients that individuals who constitute the team cannot achieve in isolation in the same way that sporting teams are capable of achieving results which exceed the contribution of any single member. Thus, team-based care should have at least two members, and usually more, who have specific roles, perform independent tasks but share a common goal.

THE COMPOSITION OF A TEAM

The composition of a multidisciplinary team required to help patients with SCI differs during the different phases of treatment. For example, while the acute phase team members may include a spinal surgeon, an SCI or general physician, an intensivist or a respiratory physician, acute spinal or intensive care nurses, specialist respiratory and acute neurophysiotherapists, occupational therapists who have special skills in managing leg limb edema and splinting, and who are less concerned with facilitating independence in self-care; social workers, dietitians, and trauma psychologists. During the rehabilitation phase of treatment, the team members will almost certainly include an SCI physician who may be a rehabilitation physician...
or physiatrist, urologist with an interest in neurourology, specialist rehabilitation nurses with a special interest in SCI, *neurophysiotherapists* who have skills in hydrotherapy as well as land-based therapy including the use of robotic gait aids, exercise physiologists who have an interest in disability sporting programs, occupational therapists who have skills not only in facilitating independence in care but also in seating prescription and making “on/off” adaptive aids, social workers who work with families as well as patients, dietitians, clinical psychologists and neuropsychologists, peer counselors, family members and care support workers and, most importantly, the patient. The medical team may also include upper limb and hand reconstructive surgeons who perform nerve and tendon transfers, plastic reconstructive surgeons who facilitate wound management and wound care nurses, respiratory physicians, endocrinologists, psychiatrists and pain specialists, and many others.3

### Points to Remember

- Reliance on multifaceted team-based care enables an evolving health care system to address the physical, psychological, and social aspects of health.
- Team-based care contributes to achieving the “triple aim” of health care reform by improving patient access, quality of care, and cost effectiveness.
- The composition of multidisciplinary team required to help patients with SCI differs during the different phases of treatment.

### WHAT KIND OF TEAM?

The terms “multidisciplinary,” “interdisciplinary,” and “transdisciplinary” are increasingly being used to define the team. These three terms refer to the involvement of multiple disciplines to varying degrees on the same continuum.4-6

#### MULTIDISCIPLINARY TEAM

In a multidisciplinary team, various professionals assess and treat the patient separately with discipline specific goals. The patient’s progress with each discipline is communicated through documentation and regular team meetings. Team conferences are conducted within clear lines of authority and control, usually (but not always) led by the attending physician. Lateral communication between team members can be quite limited (Fig. 27.1).

#### INTERDISCIPLINARY TEAM

In an interdisciplinary team, various professionals assess and treat the patient separately with discipline specific goals. The team members share assessments and have common overall goals. The goals of each discipline are coordinated into a unified plan. There is no overall responsible person; hence this involves group decision making and group responsibility for overall management planning. The coordinating conference can be led by any team member. Lateral communication is better. The patient is also considered an active member of the team. Patient progress with each discipline is communicated.
through documentation and regular team meetings but reports may relate to goals rather than disciplines (Fig. 27.2). The interdisciplinary team is very common in inpatient SCI rehabilitation units.

**TRANSDISCIPLINARY TEAM**

In a transdisciplinary team, there is an overlap of responsibilities which allows flexibility in problem solving and produces closer interdependence of team members. This concept is widely used in emerging nations particularly when there are inadequate numbers and/or unavailability of therapy professionals resulting in cross training of members and procedure development. The team may include a family member/caregiver from the early stages of rehabilitation, taking on some therapy and nursing role through an on-the-job training approach (Fig. 27.3).

Often, even in specialist inpatient SCI rehabilitation units, the team functions in a mix of all three types of teams depending on the need. There will be elements of the traditional multidisciplinary team where single professionals are working within their specialist skill set; however, much of their work will meet the criteria for the interdisciplinary team because they are working very closely together developing therapy goals with the patient and other members of the team and working toward these agreed goals; then there will be areas where there is real role “blur”, responsibilities, and skills will overlap and thus there will be elements seen more properly in a transdisciplinary team.

**Points to Remember**

- The terms “multidisciplinary,” “interdisciplinary,” and “transdisciplinary” are increasingly being used to define the team.
- In a multidisciplinary team, various professionals assess and treat the patient separately with discipline specific goals. Team conferences are led by the attending physician. Lateral communication between team members can be quite limited.
- In an interdisciplinary team, various professionals assess and treat the patient separately with discipline specific goals. There is no overall responsible person. Lateral communication is better.
- In a transdisciplinary team, there is an overlap of responsibilities which allows flexibility in problem solving and produces closer interdependence of team members.
- Even in specialist inpatient SCI rehabilitation units, the team often functions in a mix of all three types depending on the need.

**GOAL SETTING**

Goals for an SCI patient can differ between patient, family, and individual professionals. However, the goals are identified as a team and are worked upon together by the team for the patient. The goals should be Specific, Measureable, Achievable, Realistic and Time dependent, that is, SMART goals.

A patient-centered process is implemented for the comprehensive management of an SCI patient (Fig. 27.4). The patient is assessed and evaluated by different professionals identified as the team members. Problems are identified for the patient. Based on the assessment of the patient, goals from patient and team’s mutual goals are identified. They are prioritized based on short- and long-term goals. Treatment interventions matching the goals are discussed in the team meetings which are implemented...
by the individual team member. Review process for a particular goal is initiated at regular interval. Barriers are identified and treatment plan modified accordingly after discussing by the team. Ideally the patient will be involved in both the setting and the regular review of their goals.

**Points to Remember**

- Goals for an SCI patient can differ between patient, family, and individual professionals.
- Goals should be **Specific**, **Measurable**, **Achievable**, **Relevant**, and **Time dependent**, that is, **SMART**.
- Treatment interventions matching the goals are discussed in the team meetings and implemented by the individual team member.
- Ideally the patient will be involved in both the setting and the regular review of their goals.

**ROLES AND RESPONSIBILITIES OF KEY TEAM MEMBERS DURING SCI REHABILITATION**

**REHABILITATION PHYSICIANS**

The roles and responsibilities of the physician in SCI rehabilitation are to diagnose the underlying pathology and impairments. They are responsible for the medical assessment, treatment, and rehabilitation plan. They are also responsible for prescribing pharmacological and nonpharmacological treatments and assessing the response to treatment. They have an important role in ensuring that the patient is well enough to attend their therapy sessions and in setting limits or restrictions if there are health issues. These may include setting restrictions due to fracture instability or soft tissue injury, managing febrile illnesses such as urosepsis and clearing a patient to increase their therapy load or return to driving after injury. The medical staff are often approached by patients to discuss issues such as sexual function and fertility.

**REHABILITATION NURSES**

Rehabilitation nurses address and monitor the day-to-day care needs of the SCI patients. Management of tissue viability and continence problems are their domains of responsibility but they may also discuss issues such as sexual function. The nurses teach patients and their families, bladder and bowel management and experienced SCI nurses are often very skilled in these areas. They also provide emotional support to the patients and their families. The ward nurses have a very important role in facilitating rehabilitation activities outside therapy time as they are present thus allowing and even encouraging the patient to practice what they have been learning in their therapy sessions.

**PHYSIOTHERAPISTS**

Physiotherapists assess activity limitations related to bed mobility, transfers, gait, wheelchair mobility, and upper limb function. They assess physical impairments related to poor respiratory function, weakness, spasticity, limited sensation, reduced joint mobility, poor posture, and restricted fitness. They are responsible for setting activity goals related to bed mobility, transfers, gait, wheelchair mobility, and upper limb function. They can identify and treat key physical impairments limiting achievement of activity goals and are responsible for measuring outcomes of physiotherapy treatments. They often have neurophysiotherapy coupled with musculoskeletal and pain management physiotherapy skills which are required because so many people who suffer an SCI have sustained other injuries at the same time or, if they are in the older age groups, have preexisting arthritis which adds to their difficulties.

**OCCUPATIONAL THERAPISTS**

Occupational therapists are responsible for assessing the impact of SCI on activity of daily living, return to work, education, and/or leisure activities. They provide strategies and environmental adaptations to facilitate independence. They build on the skills which the patient develops in physiotherapy so that they can become independent in personal and instrumental activities of daily living.

An example of how this may work: the physiotherapist may help the patient achieve good balance in “long sitting” (that is sitting up with their legs in front of them on the bed); then the occupational therapist works with the patient so that they can utilize this newly acquired skill to dress themselves; the nursing staff then help the patient by encouraging them to practice these new activities in the ward situation by watching them and assisting only where needed rather than doing the tasks for the patient.

**ASSISTIVE TECHNOLOGISTS**

Assistive technologists are a heterogeneous group of individuals who provide services that are designed to assist people with disabilities to choose, acquire, or use assistive technology devices. They often have a background in rehabilitation engineering or occupational therapy. In SCI units they may be involved in analyzing the technology needs of a patient with an SCI and helps them select and use adaptive devices and come up with solutions which may be high or low “tech.” The solutions provided are usually designed to enhance communication, mobility and access to computers, educational materials, and environmental control, thus promoting greater independence by enabling the person with SCI to perform tasks that they were previously unable to accomplish or had great difficulty accomplishing.
SOCIAL WORKERS
Social workers promote participation, community reintegration, and social support. They may help the patient with personal and family problems as well as offering information and advice about a range of practical services including financial issues. They may also guide the patients about benefits, entitlements, services, and assistance that are available to people with disabilities. Patients may be informed about the education and employment opportunities and referrals made to relevant agencies by the social workers. Depending on the patient’s needs and that of their family, they may need to provide a great deal of support or simply point them in the right direction. Social workers working in SCI often have outstanding counseling skills and are attracted to working in this setting because of the multiple challenges faced in helping people who have sustained sudden and great losses in their lives.

DIETICIAN
Nutrition plays an important role in achieving and maintaining optimal health. Good eating habits and nutrition can assist with weight control, skin integrity, bladder and bowel management, and can optimize immune system function. Clinical dieticians provide assessment, dietary education and counseling, and dietary treatment/management.

The importance of good nutrition and dietary advice is increasingly recognized because of the risks associated with both malnutrition, particularly in the early postinjury period (in both acute and early rehabilitation phases) and obesity in people who have sustained an SCI.

PSYCHOLOGISTS
Psychologists are responsible for detailed assessment of cognitive, perceptual, and emotional/behavioral problems. They develop strategies to manage these issues with patients, their families, and other health professionals. Clinical psychologists work closely with the ward doctors and nurses in particular and may recommend referral to a psychiatrist if counseling and supportive therapies including cognitive behavioral therapies are insufficient to deal with a patient’s psychological issues.

Neuropsychologists also have a very important role in helping the patient and the team addresses any cognitive dysfunction that may only become apparent once the patient really embarks on their rehabilitation program. They can advise the team, rather than the patient, if the rehabilitation program needs to be orientated in a specific way to help deal with particular deficits such as poor auditory memory or visuospatial impairments.

PEER COUNSELORS
Peer counselors (sometimes also called peer advocates) are people who have an SCI and have the skills, training, and understanding which allow them to use their lived experience to help others who have sustained an SCI more recently. They often meet people with SCI in either the hospital or their home environment to give them support and encourage them in their reintegration process. They can offer emotional and practical support to the patient. They help patient overcome obstacles and identify problems based on experience sharing methods.

PATIENT AND FAMILY MEMBERS/CAREGIVER
Patient and family members are important team members of any team-based care. The family members/caregivers provide emotional support to the patient. Patients can monitor their progress throughout the rehabilitation. They are given an opportunity to question the process or the goals themselves, and direct their rehabilitation. Patient and caregiver education is an important and integral part of any rehabilitation program.

Points to Remember

- The roles and responsibilities of the physician in SCI rehabilitation are to diagnose the underlying pathology and impairments.
- Rehabilitation nurses address and monitor the day-to-day care needs of the SCI patients.
- The nurses teach patients and their families bladder and bowel management.
- Physiotherapists assess activity limitations related to bed mobility, transfers, gait, wheelchair mobility, and upper limb function.
- Occupational therapists are responsible for assessing the impact of SCI on activity of daily living, return to work, education, and/or leisure activities.
- Social workers promote participation, community reintegration, and social support. They may also guide the patients about benefits, entitlements, services, and assistance that are available to people with disabilities.
- Clinical dieticians provide assessment, dietary education as well as counseling and dietary treatment/management.
- Psychologists are responsible for detailed assessment of cognitive, perceptual, and emotional/behavioral problems.
- Peer counselors help patient overcome obstacles and identify problems based on experience sharing methods.
- Patient and family members are important team members of any team-based care. The family members/caregivers provide emotional support to the patient.
- Patient and caregiver education is an important and integral part of any rehabilitation program.
A GOOD TEAM

The quality of a good team is based on the following factors:

- Personal characteristics of a team member
- Leadership
- Characteristics of a team
- Team meetings
- Communication

A good team member accepts the differences and perspectives of others. They are able to function independently and are able to negotiate role with other team members. They are willing to take risks, form new values, attitudes, and perceptions. They often have to tolerate constant review and challenging of their ideas but accept this as part of their role in the team. They accept the team’s philosophy of care and possess personal identity and integrity.

Usually when an effective team meets or works together, the atmosphere is informal, comfortable, and relaxed. Tasks or objectives are well understood and a lot of discussions occur with active participation of all. Members listen to each other and disagreements are not suppressed. Members are free to express their ideas and criticism is frequent, frank, and relatively comfortable. Clear assignments are made and accepted for all actions and leaderships shifts from time to time.

Good communication is the key to all good teams. It enables everyone to work together to achieve set goals. Communication strategies which percolate all information to all team members are necessary and thus should be identified. There may be patient/family meetings to initially educate the patient and family about the team’s goals and to update on the progress seeking patient and family inputs for goals and the plan of care. Formal team meetings should be conducted to review the interdisciplinary plan of care and review and update goals.

In a true interdisciplinary team, the functions of leadership and membership are viewed as synonymous. A leader helps the team to decide on its purpose and goals, focus on its own process of work, become aware of its own resources and how best to use them, evaluate the progress and development, be open to new and different ideas, manage conflicts and learn from its failure and frustrations as well as from its success.

A critical area for effective team is the team meeting. There is no model describing how to run team meetings. Some teams rotate the leadership responsibility to ensure leadership and associated tasks are shared. However, all meetings should be patient/family-centered, efficient, and involve all team members in a respectful manner.

Points to Remember

- The quality of a good team is based on the personal characteristics of a team member, leadership, communication, and team meetings.
- The atmosphere is informal, comfortable, and relaxed in team meetings.
- Communication strategies which percolate all information to all team members are necessary and thus should be identified.

BARRIERS TO A GOOD TEAM

The team must have a built-in feedback mechanism through which it constantly monitors itself and maintains its effectiveness. The following can be a barrier to a good team:

- Complacency
- Lack of information sharing
- Culture
- Lack of time
- Fatigue
- Lack of role clarity
- Burnout
- Inappropriate use of technology
- Inconsistent team membership
- Inadequate or lack of training
- Inconsistent team leadership
- Varying communication styles
- Constant organizational change

Barriers result in suboptimal functioning of a team. They can be resolved through a team-building process. The problem or problems should be identified and all members should agree that there are problems and work on them. Members should accept that solving a problem is everyone’s responsibility and the end result should be better communication among the team members, thus enhancing the rehabilitation process for an individual.

Points to Remember

- The team must have a built-in feedback mechanism through which it constantly monitors itself and maintains its effectiveness.
- Lack of time, inconsistent team leadership, inconsistent team membership, complacency, and lack of information sharing can form barriers to formation of a good team.

PROBLEMS IN A TEAM

Problems in a team include decreased staff satisfaction, team splitting, inefficiency, hand-over problems where team members are afraid to speak with increased risk of adverse events.
**TEAM COORDINATOR**

The team coordinator is responsible for moving the team efficiently through the process of the team meeting to make sure that the work of patient care planning is completed. A team coordinator must be identified among the team members. They are responsible for scheduling, arranging, and conduct of the meeting. The team coordinator prepares and distributes the agenda of the meeting and ensures that the agenda is followed. They clarify purpose and help the team identify the goal(s). They ensure that all team functions are assigned to various team members. They encourage everyone to participate and ask questions to clarify comments and restate if members are confused. They should summarize and organize the ideas discussed to gain commitment. They should encourage the team to finish each agenda item before moving on to the next item. The reality of this leadership position is that it can be very difficult and, at times, lonely. Thus the coordinator role may be shared between several senior members of the team and be task specific.

**NEGATIVE AND POSITIVE MESSAGES**

Negative messages within the team can have a very detrimental effect on either an individual or the entire team. One of the most negative messages is where there is a lack of recognition of good work or when an individual takes credit for a team’s achievement. Thus recognizing the worth of all members of the team and providing positive feedback and praise is fundamental for the good functioning of the team.

Providing some joint training of the different disciplines, sharing their expertise in formal teaching sessions or presentations, and sharing recreational time together in and out of the workplace may actually facilitate better team function at work with better outcomes for the patient as well.10-12

**PATIENT SAFETY**

Patient safety is now being taught in cross-discipline teams. Interprofessional education and practice programs such as those outlined in “Creating the Health Care Team of the Future” by Nelson et al. and team-building programs aimed at improving communications within team actually improve patient safety as well as improving the way in which teams work together.

**Points to Remember**

- A team coordinator must be identified among the team members. They are responsible for scheduling, arranging, and conduct of the meeting.
- Negative messages within the team can have a very detrimental effect on either an individual or the entire team.

**CONCLUSION**

Team-based care is one of the most fundamental factors in rehabilitation and an essential part of high-quality patient care. Role of multidisciplinary team starts from acute phase and continuous into rehabilitation phase and later on into the transition onto community living. There is more efficient use of resources resulting in improved health outcomes for the patient. Patient is an integral part of any team-based care. Good team dynamics and communications are the key for a successful team.

Rehabilitation is an area where teams (whether multidisciplinary, interdisciplinary, or transdisciplinary or a mix) have to function well to achieve the best outcomes for people who have suffered significant disabling conditions such as SCI. Communication, consultation, and collaboration are the hallmarks of a good team. The best teams are also creative and think outside the square, challenging each other to do better for the team and for the patients they serve and try to ensure that communications are open and clear. However if members of a team realize that there has been a breakdown in communication, which can occur in the very best teams, they do something to rectify the problem as quickly as possible by reopening the lines of communication which immediately reduces the risk of patient harm and ensures the best outcomes for all.

**Key Points**

- Team-based care contributes to achieving the “triple aim” of health care reform by improving patient access, quality of care, and cost effectiveness.
- The terms “multidisciplinary,” “interdisciplinary,” and “transdisciplinary” are increasingly being used to define the team.
- Multidisciplinary teams convey many benefits which include improved health outcomes and enhanced satisfaction for clients, the more efficient use of resources and enhanced job satisfaction for team members.
The composition of multidisciplinary team required to help patients with SCI differs during the different phases of treatment.

• Often, even in specialist inpatient SCI rehabilitation units, the team functions in a mix of all three types depending on the need.

• Goals for an SCI patient can differ between patient, family, and individual professionals. The goals should be Specific, Measureable, Achievable, Realistic, and Time dependent, that is, SMART.

• Ideally the patient will be involved in both the setting and the regular review of their goals.

• There are defined roles and responsibilities of the physician, rehabilitation nurse, ward nurse, physiotherapist, occupational therapist, social worker, peer counselor, psychologist, and family member as team members in SCI rehabilitation.

Patient and caregiver education is an important and integral part of any rehabilitation program.

• The quality of a good team is based on the personal characteristics of a team member, leadership, communication, and team meetings.

• The team must have a built-in feedback mechanism through which it constantly monitors itself and maintains its effectiveness.

• Lack of time, inconsistent team leadership/membership, complacency, and lack of information sharing can form barriers to formation of a good team.

• A team coordinator must be identified among the team members. They are responsible for scheduling, arranging, and conducting the meetings.

• Negative messages within the team can have a very detrimental effect on either an individual or the entire team.

### REFERENCES


