Occupational Therapy Interventions Across the Continuum of Care: From ICU to Home

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Introduction

Spinal cord injuries (SCI) severely impact one's entire life, from range of motion and strength deficits to difficulties performing basic activities of daily living (ADL) or more complex tasks like cooking or driving (IADL). An SCI limits a person's ability to participate in daily roles and occupations. Occupational therapists are skilled clinicians who specialize in creative strategies to maximize upper extremity function and functional performance with ADL/IADL. However, for many new clinicians, working with clients with an SCI can be overwhelming due to the many complex medical and therapeutic needs. This poster aims to serve as a guide for intervention and goals throughout the continuum of care. Typically, occupational therapy intervention for a person with an SCI progresses throughout the different settings. For example, the primary focus of occupational therapy intervention in acute care is education, maintaining skin integrity and positioning; whereas the focus in inpatient rehabilitation is gaining basic ADL/IADL function, education and training for transitioning home; and outpatient therapy focuses on refining skills and reintegrating life back into the community. Understanding the benefits of occupational therapy intervention and knowing how they can be used throughout the rehabilitation journey is important to provide patients with the best opportunities for maximum recovery.

Providing effective, evidence-based practice is the most efficient strategy to help persons with SCI meet their functional goals. Evidence shows that early intervention with interdisciplinary, SCI-focused care at the acute level is associated with a quicker transition to rehabilitation and may result in decreased secondary complications, decreased mortality rates, and more efficient functional progress (Harnett et al., 2020). Additionally, SCI focused rehab may demonstrate better rehabilitation outcomes (Pattanakuhar et al., 2019) and it improves the likelihood of the person returning home (Cheng et al., 2017). It is also important to note that the most significant functional gains are made during inpatient rehabilitation so providing the highest level of rehabilitative care is integral to their journey (Derakhshanrad et al., 2015). Lastly, multidisciplinary SCI-focused programs at the outpatient level assist with functional gains and overall goal attainment (2015). Knowing the expected outcomes and realistic goals throughout the SCI spectrum of care help ensure that clients with SCI are getting specialized and effective care to aid with living full and productive lives (Truchon et al., 2017).

Special Considerations

This poster covers a typical continuum of rehabilitation for an individual with an SCI (acute care > inpatient rehabilitation > outpatient). It is not uncommon for individuals to go to subacute rehab before or after inpatient rehabilitation. A long-term acute care hospital is another setting that an individual with an SCI may go at some point during their care. Clients going to different settings may have different goals and interventions depending on the level of the care they need and the type of setting they will be in.

Other factors and comorbidities such as weight, age, fractures, dual diagnosis, complete vs incomplete injury, and prior medical history may impact an individual's goals and interventions addressed in occupational therapy.

References

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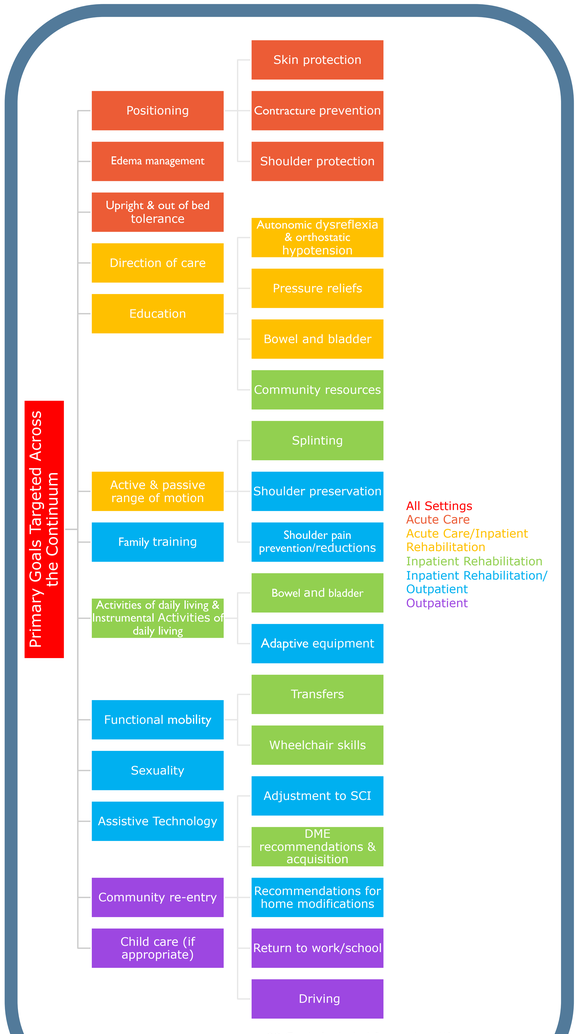
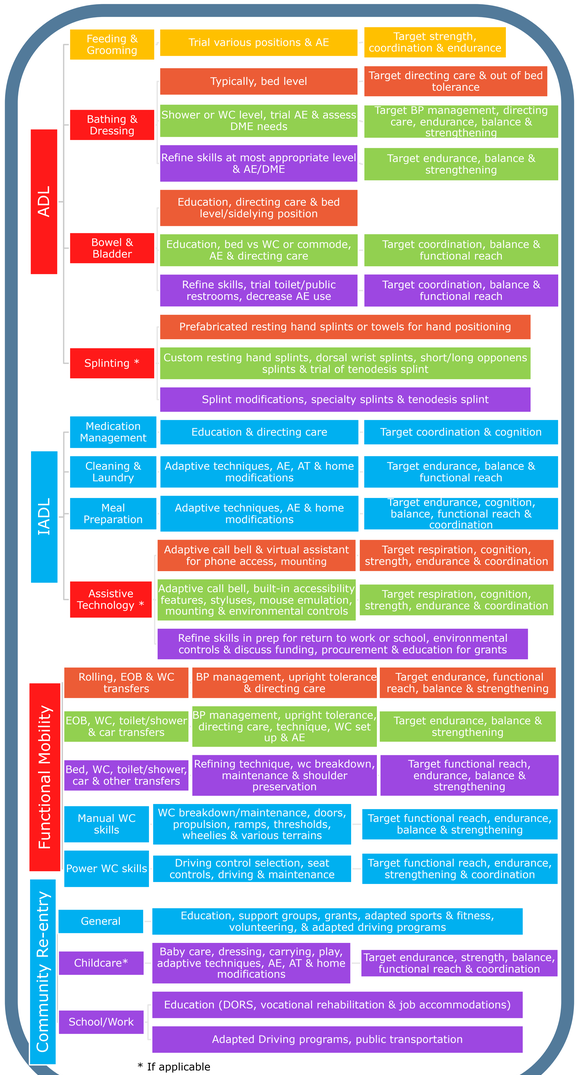


** Goals included for each setting are the primary goals and are not inclusive of all goals that could be addressed.



* If applicable

Case Study

John is a 45-year-old male admitted after a MVC resulting in a T6 AIS B spinal cord injury. In the emergency room, John is stabilized and ordered to wear a thoracic lumbar sacral orthosis (TLSO) due to spinal fracture. John spends 5 days in the ICU because of an increased WBC and concern for a possible gastrointestinal rupture. Once stable, occupational therapy (OT) orders are initiated. Aside from the standard evaluation questions and assessments, the OT prioritizes:

Acute Care:
Education: Educate John and his family regarding disease process and plan of care**:** Blood pressure management, skin care/integrity, positioning
Upright/Out of Bed Tolerance: John requires compression stockings and an abdominal binder due to a drop in blood pressure at the edge of the bed. The focus is to increase the amount of time John is able to sit upright while maintaining stable vital signs .
Skin Integrity: He is provided with heel lift boots to unload pressure off his heels. Signs are placed in the room instructing him to change position in the bed every 2 hours and weight shift every 30 minutes when sitting up. Initiate transfer training at the edge of the bed by working on balance and righting reactions.
ADL: Training for upper body ADL is initiated from supported and/or unsupported position in the bed . Initiate lower extremity stretching in prep for leg management for lower body ADL.

Inpatient Rehabilitation:
Skin Integrity: Provide John with pressure relief timer to ensure he completes his pressure reliefs as recommended. Initiate skin inspection techniques with long handled mirror and educate caregiver to assist as needed. John will also participate in a seating clinic for custom lightweight wheelchair with appropriate cushion.
Bowel and bladder management: Work with nursing to teach John the basics of bowel and bladder care. Practice sterile technique for self-cathing at wheelchair and bed levels; provide adaptive equipment to aid with pants management as needed. Begin bowel training at bed level and encourage John to participate in various aspects of his care. Ensure he is independent with directing care if he is unable to complete by himself. Train family as appropriate.
Functional mobility : John will continue wearing the compression stockings and abdominal binder to stabilize his blood pressure, with close monitoring during sessions. He will continue working on more difficult skills, such as dynamic sitting balance, righting reactions, transfer board transfers to drop-arm commode, wheelchair/bed, tub bench and car. May progress to lateral/popover transfers as appropriate.
ADL : Initially John will practice basic ADL (bathing and dressing) in supported long sit in bed. Extensive practice and LE stretching will be provided for John to obtain functional positions such as tailor sit or figure-4 for LB ADL. Adaptive equipment such as leg loops may also be provided.

Outpatient Therapy:
Skin Integrity: Assess John's pressure relief technique and ensure he is consistent and independent with this. Also address John's skin inspection technique and provide further training if not independent. If wounds are present, assess sitting surfaces and refer him to seating clinic if needed.
Shoulder Preservation: Educate John to complete alternating styles of pressure reliefs (not just wheelchair push-ups), strengthen rotator cuff muscles and provide education on ergonomic positions for work, transfers, and ADL/IADL.
Refining ADL and functional mobility skills: Upgrade ADL from bed level to wheelchair or DME (eg: commode or tub bench); improve his functional independence and try to decrease assist on caregivers. Address home management tasks: laundry, housekeeping, cooking, (etc) and provide education/resources for adaptive equipment/assistive technology and home modifications as necessary. Work on popover/lateral transfers to decrease reliance on transfer board as appropriate.
Bowel and Bladder Management: Ensure John is independent with self-cathing from wheelchair level. Focus on improving independence with bowel program: provide training, education (technique, positioning, AE/DME), UE stretching and transfer practice; try to transition program from bed level to commode.
Community Re-entry and Return to Work: Educate John about reasonable accommodations for return to work, driving rehabilitation resources and grants for vehicle/home modifications. Refer John to vocational rehabilitation and/or Department of Rehabilitation Services (DORS) to begin job training (if he is unable to return to his previous job). Also, address car transfers (to passenger or driver side of vehicle as appropriate) as well as wheelchair breakdown if he will be driving. Provide education for community-based adaptive gyms/online exercise classes, and support groups (in-person and online). Also provide education and resources for AT as needed (eg: use of Alexa to manage lights once he is in bed).