

# SPINAL CORD INJURY

## A PRIMER FOR SURGEONS

### INITIAL FRAMING

- Recognize SCI as both a surgical emergency and a life-changing, often life-limiting event.
- Pair discussions of operative/intensive care plans with honest talk about expected motor/sensory loss, ventilator dependence risk, overall prognosis, likely functional outcomes, and long-term complications.
- Describe what the exam and early imaging can and cannot tell us, and time frames for a more confident prognosis (days-weeks for neurologic evolution, months for functional plateau).

### COMMUNICATION

- Identify health care proxy/surrogates early and clarify patient values focusing on independence, cognitive function, avoidance of prolonged dependency, tolerance of complications/suffering, religious or cultural priorities, etc.
- Aim to have a structured family meeting that includes all relevant specialists within 24-48 hours of admission.
- Review imaging and exam findings in accessible terms and outline the most probable functional ceiling even with prognostic uncertainty (e.g., “likely no recovery below the shoulders”).
- Translate exam findings into concrete statements if appropriate for the ASIA AIS score and level of impairment (e.g., “with this injury walking again is highly unlikely”).
- Frame decisions around functions that matter to the patient (e.g., breathing without a machine, ability to feed themselves, living at home, not needing a caregiver, etc.) rather than possible procedures or abstract mobility goals.
- For high cervical injuries with a risk of ventilator dependence, explore patient preferences about tracheostomy and consider time-limited trials (e.g., 7-10 days) of ventilatory support as well as withdrawal of this support based on patient’s values and goals.
- Clearly document and communicate code status, ventilatory preferences, thresholds for ICU transfer, and limits on invasive monitoring or surgery.
- At new inflection points (e.g., failed extubation, time-limited ventilatory trial, new sepsis, progressive instability, or poor neurologic evolution) revisit goals, discuss the option of shifting focus primarily to comfort and normalize hospice involvement when appropriate.

### PROGNOSTICATION

- Intense grief and hopelessness early on do not reliably predict long-term happiness or quality of life. Many people with SCI report gradual increases in life satisfaction over the years despite functional limitations. Emphasize that the majority of long-term survivors self-identify as happy, with resilience associated with personality, strong social support, spiritual connection, and ongoing meaningful activities.
- Anchor prognosis on neurological level, completeness (ASIA AIS grade) and associated injuries/comorbidities. In general, lower injuries and incomplete injuries have better functional recovery and higher odds of meaningful ambulation compared to high or complete injuries.
- Age, pre-morbid function, delay to rehabilitation, and early functional scores contribute to expected independence in mobility and self-care.

### SYMPTOM MANAGEMENT PRIORITIES

- In the first months, depression is very common and can be worsened by poor pain control. Screen routinely for depression, anxiety, suicidal ideation and other forms of psychological distress and involve psychiatry, psychology, chaplaincy, social work, and PM&R (if available) early.
- Anticipate severe neuropathic and musculoskeletal pain and use multimodal regimens for management (e.g., opioids, neuropathic agents, muscle relaxants, regional techniques, etc.).
- Institute early pressure ulcer prevention, bowel regimens, and bladder management.

### INTEGRATING REHABILITATION

- Present early rehabilitation not as “cure” but to maximize independence, reduce complications, and enable time at home.
- For patients with limited prognosis (e.g., malignant cord compression, severe comorbidities), target rehabilitation toward achievable, meaningful goals (transfers, communication aids, symptom control), not arbitrary functional scores.

### FAMILY AND CAREGIVER SUPPORT

- Acknowledge and incorporate caregiver burden explicitly and anticipate long-term physical, financial, and emotional strain.
- Engage case management and social work early for home-care resources, equipment, disability paperwork, and community support.
- Prepare families for common trajectories, including prolonged ICU stays, prolonged rehabilitation, recurrent complications, and readmissions.

### RESOURCES FOR PATIENTS AND FAMILIES

[www.traumasurvivorsnetwork.org](http://www.traumasurvivorsnetwork.org)  
[www.christopherreeve.org](http://www.christopherreeve.org)  
[www.facingdisability.com](http://www.facingdisability.com)



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