The impact of spinal cord injuries in underserved communities and what is needed to improve care.

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Spinal Cord Injury (SCI)

- Including injury in:
  - spinal cord
  - conus medularis
  - cauda equina

- Excluding:
  - plexus lesions
  - injury to peripheral nerves
Terms of action

- Prevention
- Acute interventions
- Rehabilitation!!!!!!!!!!!!!!!!!!!!
- Equalization of opportunities
Causes of spinal cord injury

- Trauma
- Non trauma
Traumatic SCI

- Road traffic accidents
- Falls
- Violence
- Sports

- Men 80%: Women 20%
Nontraumatic SCI

- Infection (TB, HIV)
- Vascular (ischemia or hemorrhage)
- Inflammation, autoimmune/demyelinating
- Cord compression (eg. stenosis, tumor, epidural abscess, disk herniation)
- Vitamin B12 deficiency
Consequences of SCI

Below the level of injury:

• Paralysis: loss of movement/sensation
• Bladder and bowel dysfunction
• Sexual dysfunction
• Autonomic dysfunction
• Respiratory dysfunction – tetraplegia
Consequences of SCI

Sexual dysfunction

• Impaired erection
• Impaired fertility
  → ejaculatory dysfunction
  → poor sperm quality

• Impaired lubrication
• Remain fertile and can have children
Consequences of SCI

Autonomic dysfunction
- orthostatic hypotension
- loss of bladder/bowel control
- loss of thermoregulation
- disturbance in perspiration (sweating)
Consequences of SCI

Respiratory dysfunction

- The higher the level of injury, the higher the risk!
- Diaphragm innervated by Phrenic nerve at C3-C5
- Poor cough ability

Major cause of death in the acute phase!
Possible complications

- Thromboembolism
- Pressure wounds
- Pain
- Infections
- Gastrointestinal – peptic ulcer
- Spasticity
- Contracture
- Heterotopic ossification
- Autonomic Dysreflexia
Patient centred multi-disciplinary team-work
Goals for SCI Care and Rehab

- Maintain optimal level of wellness
- Maintain optimal functioning
- Minimal or no complications of immobility
- Learn new skills, self care
- Return to home
- Integrate back into community
What determines the outcome?

• Physical/Medical
  - Level & completeness of injury
  - Age
  - Pre-morbid function
  - Co-morbidities

• Psychosocial
  - Personality
  - Depression
  - Motivation
  - Family/friend support

• Environment

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• Patient and family information
• Responsible for medical health conditions
• Prevention of secondary complications
Focus areas

NURSING

Bladder management
• Indwelling catheter immediately after injury
• Individual bladder regime CIC

Bowel management
• Individually adapted bowel routine for every patient.

Prevent pressure ulcers!
• Pressure relief training
• Individual turning schedule for every patient

Practice ADL skills
Focus areas
PHYSIOTHERAPY

- Respiratory training
- Mobilization
- Strengthening
- Transfer training
- Balance training
- Prescription of technical aids
Focus areas

OCCUPATIONAL THERAPY

- Activities of Daily Living (ADL)
- Hand function
- Splinting
- Prescription of technical aids
- Home and work place assessments
- Caregiver training
Focus areas
REHAB COACHES

• Coping with SCI
• Transfer techniques
• Wheelchair skills and maintenance
• Dressing

- a role model for how to live an active and positive life
“Highest possible level of independence for an active, healthy and meaningful life”!

Requires a true cooperation between staff and patient

**Rehab team**
- Comprehensive pathway
- Dedicated and competent rehab team
- Relevant technical aids and consumables
- Follow up, - life long care

**The patient**
- Drive to be rehabilitated
- Drive to return to social life
- Drive and possibility to return to work
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- Acute interventions
- Centralized care
- Stable and competent team
- Equal benefits for SCI patients
- Vocational rehab
Introduction to Active Rehabilitation Program
December 2017

40 years of community peer-based programs for persons with Spinal Cord Injury in over 20 countries: