Challenges in Rehabilitation

David Crandell, MD
Laura K. Gosselin, OTR/L
Jenna Becker, OT/S

Spaulding Rehabilitation Hospital
September 13th, 2021
What is Rehabilitation

re·ha·bil·i·ta·tion
ˌrē(h)əˌbiləˈtāSH(ə)n/
noun
noun: rehabilitation; plural noun: rehabilitations

the action of restoring someone to health or “typical life” through training and therapy after imprisonment, addiction, or illness/injury. "she underwent rehabilitation and was walking within three weeks"

the action of restoring someone to former privileges or reputation after a period of disfavor. "a posthumous rehabilitation of the activist"

the action of restoring something that has been damaged to its former condition. "the rehabilitation of the swamp"
Focus on recovery, compensation, and adjustment, with attention to function and quality of life.

Patients with acute and chronic pain, cerebral palsy, amputation, cancer, burns, deconditioning, joint replacements, sports injuries, major orthopedic trauma, spinal cord injury, traumatic brain injury, stroke, neurodegenerative disorders.
Areas of Focus in Rehabilitative Care

- Impairment
- Mobility
- Activities of Daily Living
- Instrumental ADLs
- Cognition
Activities of Daily Living (ADLs)

- Eating
- Dressing / Undressing
- Bathing
- Transferring
- Toileting
- Continence
Instrumental Activities of Daily Living (IADLs)

- Light housework
- Meal preparation
- Medication administration
- Shopping
- Telephone
- Money management
- Social media
- Care for others and for pets
- Child rearing
- Community mobility
- Health maintenance
Rehabilitative Approaches

- Restoration of function
- Prevention of complications
- Use of technology
- Use of compensatory strategies
THIS FIGHT IS YOURS

JOIN THE MARCH OF DIMES
International Classification of Impairments, Disabilities, and Handicaps

Published in accordance with resolution WHA29.35 of the Twenty-ninth World Health Assembly, May 1976
These points can best be illustrated with examples:

- **Impairment**
  - language
  - hearing
  - vision
  - skeletal
  - psychological

- **Disability**
  - speaking
  - listening
  - seeing
  - dressing, feeding
  - walking
  - behaving

- **Handicap**
  - orientation
  - physical independence
  - mobility
  - social integration
President George H.W. Bush signs the Americans with Disabilities Act on July 26, 1990
Find strength in a new location.
The New Spaulding Rehab Hospital
The Rehabilitation Marathon began when the race stopped.
Examples of adaptations made to maximize functional independence within the acute rehabilitation setting.
Why a ban on doorknobs make sense

VS.

CONVERTS DOOR KNOBS TO HANDLES FOR EASY OPENING AND CLOSING OF DOORS
Having trouble staying awake in class?
SpillNot No-Spill Mug Holder
Case Study

Pt. is a 51 year-old laundromat owner in NH who had a powerful firework explode in his hands on 2/14/20. He placed snow on his face. He was eventually able to get into his house but unable to call for help. He stayed awake all night. When he did not show up for work at 7:30 am on Saturday morning, his Mother asked his brother to check on him. His brother entered his house and found him and called 911. He was brought to the Portsmouth Hospital and then transferred to the BWH with bilateral hand and eye injuries.
Burden of Trauma:

- Right below elbow amputation
- Left partial hand amputation
- Bilateral globe ruptures resulting in total blindness
- Hospital course complicated by agitation and visual hallucinations
Mobility: Environment Navigation
ADL: Self Feeding
With all daily tasks, please encourage Brian to complete as much as he can (within safety) without immediately jumping in to assist him. That is how he will progress his independence.

Assisting Brian with self-feeding

- Brian has been trialing various ways to be more independent with feeding
- Below are pictures with the Velcro strap and universal cuff on his right arm
- We have also trialed putting a utensil beneath his left pinky
- Brian benefits from a scoop bowl and items always placed in the same place
- Brian benefits from use of long straw and beverages always located in the same place
ADL: Grooming
Bathroom

- Ensure that there is enough room for maneuvering within the bathroom by providing a clear path of travel
- All rugs remaining in the bathroom environment should be non-skid
- Consider use of a temperature gage for the sink and shower head for individuals with sensory loss

Toilet:

- **Recommended use of a bidet for toileting to assist with performing posterior hygiene.** As Brian's wounds heal on his left hand he will be able to perform his own hygiene. But a Bidet is a good option in the interim. I've attached options for purchasing a bidet below. Brian can pull his pants up and down with his left hand
- Brian performs ambulatory transfers to the toilet without an assistive device with close supervision and cueing to navigate due to visual deficits. Once seated he can be left alone. With continued practice of navigating to the toilet I anticipate he will progress to independent
Round 2: Rehab with a Prosthesis

GOALS

- Eating with Prosthesis
- Cut food (rocker knife)
- Live more independently
- Button pants
- More independent w/ community mobility w/ walking stick
- Pick up gallon water & pour
- Plug cellphone in
- Play hockey

Diagrams: Bowden Cable Control System
- Ring Harness
- Mechanical Hook
- Control Cable
- Triceps Cuff
- Cable Housing
ADL: Self- Feeding
IADL Participation

Electronic Device Management

Beverage Retrieval

Meal Clean-up/ Dishes
Adaptations Promoting Independence
Technology in Acute Rehabilitation

• Current and advancing technology is having an impact on an individual’s function and their ability for regaining independence after a traumatic accident, with progression of disease processes, or throughout the aging process.

• As the percentage of the population of elderly increases, their need for rehabilitative services and care will increase significantly in the decades ahead. The advancements of technology will allow them to remain safely in their homes for longer and promote "Aging in Place".

• As a specialty, rehabilitation, is open to patient-centered innovation, both high and low tech, and universal design that decreases disabilities and handicaps to improve an individual’s function and quality of life.
REFERENCES


