COMMONWEALTH OF AUSTRALIA

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Learning in Rehabilitation

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Learning objectives

At the end of this session the student should be able to:

• define rehabilitation
• recognise learning opportunities on an inpatient rehabilitation unit and in the outpatient/community-based rehabilitation setting
• list the impairments, activity limitations (disability) and participation restrictions (handicap) associated with acute medical conditions and chronic illnesses
• identify patients who will benefit from a rehabilitation program, and grasp the concept of rehabilitation assessment and triage
• know the role of rehabilitation and subacute care in our health system service. Have an overview of rehabilitation process issues and service delivery. Understand how a rehabilitation program fits into the patient’s journey through the health care system
• appreciate the interdisciplinary approach
• understand the value of: patient and carer education, prognosticating and predicting functional outcome, and community re-integration.
Outline and learning objectives

Definitions and concepts:

• What is rehabilitation?

• Where does learning in rehabilitation fit in your course?

• What impairments, activity limitations and participation restrictions are associated with acute medical conditions and chronic illness?

• What does a rehab doctor and his/her team do?
Outline and learning objectives (continued)

Rehabilitation processes - referral, assessment and management

• Who should be referred to rehabilitation?
• Who goes to rehabilitation, where, and in what setting?
• What happens during rehabilitation? (briefly)

• *Interdisciplinary* approach
Outline and learning objectives
(continued)

Where does rehab fit...

In our health system
- Rehab in the *health care system* and in a *patient’s journey*
- Long term community follow up and disability management

In your course
- Rehab learning opportunities throughout PCP2 (and PCP3)
- Exams!
We are here
(Introduction)

Rehab in PCP2

Rehab ward/clinic attachments/visits

Patient Partner

Clinical colloquia
Rehab in PCP3

Aged Care Term

Scholarly Selective

Clinical Colloquia
Definitions

• ‘Disability’
sometimes used as umbrella term for any or all of the components:
• Impairment *
• Activity limitation * (old term = “disability” - the strict definition)
• Participation restriction * (old term = “handicap”)

* Definition endorsed by WHO ICF (International Classification of Functioning, Disability and Health) 2001
SO, WHAT DO YOU PREFER TO BE CALLED? HANDICAPPED? DISABLED? OR PHYSICALLY CHALLENGED?

"JOE" WOULD BE FINE.

THE MOST APPROPRIATE LABEL IS USUALLY THE ONE PEOPLE’S PARENTS HAVE GIVEN THEM.
The Case of Mr G

• A 62 year old self-employed electrician admitted onto the acute stroke unit with a large left middle cerebral artery (MCA) stroke.
Definition - Impairment

- *body-based*

- "any loss or abnormality of psychological, physiological or anatomical structure or function."
Mr G’s Impairments

- R hemiparesis, R facial droop
- R hemi-sensory changes
- Dysphasia (expressive > receptive), mild dysarthria
- Dyspraxia
- Gerstmann’s syndrome (dysgraphia, dyscalculia, L-R confusion, finger agnosia)
- R inattention, R homonymous hemianopia
- Mild dysphagia
- Low mood*
- R Shoulder pain*
- Disturbed sleep pattern*
- Fatigue*
Definition - Activity Limitation (old term “Disability”)

- **Functional** consequences of impairment

- **ADL** (Activities of Daily Living) limitations at the level of the whole person

- “difficulty in the performance, accomplishment, or completion of an activity in the manner or within the range considered normal for a human being.” (WHO)
Mr G’s Activity Limitations

• Difficulty with communication: expressing more so than comprehending, writing, numbers

• Inability to transfer on and off bed/chair, inability to walk unassisted

• Inability to use R hand to perform tasks – using cutlery to eat, shave, shower, dress, toileting (undress, re-dress, wipe)
Definition - Activity Limitation (continued)

• Activity limitation is a form of behavior. It is determined as much by the person's attitude, beliefs, or motivation as by any underlying impairment.
Disability (video)

The video is also available to watch via MD Connect

Doctor of Medicine
Definition - Participation Restriction (old term “Handicap”)

• Beyond the level of person

• Problems experienced by an individual in life situation and social contexts

• “the disadvantage to the individual resulting from an impairment or disability that limits or prevents the fulfillment of a role that is normal, depending on age, sex, and social and cultural factors for that individual.” (WHO)
Definition - Participation Restriction / Handicap (continued)

- Handicap experienced by a person is not determined just by their impairment and disability, but also by environmental factors:
  - social attitude, socio-economic climate
  - physical environment
"What luck! Wheelchair accessible!"
Doctor of Medicine
"Damn, I knew that disabled access would be our undoing."
Mr G’s Participation Restrictions

• Loss of role as bread-winner and head of family, (self-employed, no income protection, in debt, wife does not work, wife does not drive)
• Unable to return to work as electrician, unable to perform administrative paperwork relating to business
• Unable to return to gardening
• Unable to return to role as local Italian Club secretary/treasurer
• Cannot drive
Mr G’s Participation Barriers/Environment Factors

- Double storey house – built with no downstairs bathroom
- The pension is not enough to pay debts
- Can he find a job working for someone else?
- Italian club office is on second floor and has no lift.
Disability Management for Mr G

- Mr G is medically stable post stroke, but cannot:
  - mobilise independently
  - perform self care
  - consistently communicate basic needs

→ Not safe to be discharged from hospital
  (as assessed by PT and OT)

→ Needs Rehabilitation (a subacute service)
Definition – Rehabilitation

- **Rehabilitation** – return a person to maximal physical, psychological, social and vocational functions (after illness or injury)

- Maintain health and prevent secondary complications (in chronic conditions)
Definition – Rehabilitation

Rehabilitation Approaches*:

1. Reduce disability
2. Reduce impact of disability by acquiring new skills and strategies
3. Alter the environment so that a given disability leads to as little participation restriction as possible

Rehabilitation - Disability Management:
Which patient groups might benefit from rehabilitation?

‘Disability’ (umbrella term) groups*:
• Physical (14% Australians) / diverse (which includes acquired brain injury)
• Intellectual / learning
• Psychiatric
• Sensory / Speech

• 2012 SDAC (Survey of Disability, Ageing and Carers) found 4.2 million Australians (18.5% population) had a disability**

Which patient groups might benefit from rehabilitation? (continued)

Activity Limitation / Disability may be:

- caused by illness or accident, or genetic.
- permanent or short-term
- obvious or hidden (TBI)
- in a young person or old person
Graph 3 - Persons with profound or severe core-activity limitation, by main long-term health condition

- Endocrine
- Nervous system
- Circulatory system
- Respiratory system
- Musculo-skeletal
- Injury and other external causes
- Psychoses or mood affective
- Neuroses or stress-related
- Intellectual or developmental

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Rehabilitation Physicians

Rehabilitation Physicians in our role as **doctors**:

- Diagnose by hx taking, examination and ix – IP and OP
  (Identify patients who will benefit from rehabilitation – role of all doctors and health professionals)

- Manage:
  - General medical conditions - BSL, APO, wound infection, vasospasm
  - Rehab-specific - Autonomic dysreflexia, heterotopic ossification, spasticity, PTA, sexual counseling

- Assess activity limitation/participation restriction, and generate a ‘problem list’

- Predict possible outcomes
Rehabilitation Physicians

Leading the rehab team, case conferences

• Ensure appropriateness of therapy, goals and plans

• Prescribe meds, exercises (medical contraindications), adaptive devices, and mods.

• Neuromuscular and musculoskeletal injections

• Consult, refer and report with medical colleagues.

• Measure and benchmark clinical outcomes
  - FIM (Functional independence Measure): tool with list of ‘activities’
  - Measures how independent/dependent a patient is, and how effective rehab has been (funding purposes – limited health resources need to be managed in most equitable way).
Rehabilitation Physicians in our role as advisors:

- Communicate with patients and their carers (education - natural history, symptoms and complications, prognosis, resources)
- Provide support and counselling.
- Advocate for patient’s, and carer’s, rights and resources
- Persevere to achieve optimal outcomes
Rehabilitation Physicians in our role as educators:

- Learn from and teach peers and trainees, patients and carers
- Participate in medical education programs to teach principles of rehabilitation management.
- Promote health in individuals and groups by preventing disability.
- Liaise with and advise government and administrators
- Engage in research and development of Rehabilitation Medicine (scientific principles and service delivery)
Rehabilitation Physicians in our role as managers:

• Solve complex problems in individuals and organisations.
• Coordinate and lead multi-disciplinary rehabilitation services.
• Monitor, review and report on rehabilitation issues.
• Certify abilities and outcomes
Our Rehab Team

A multidisciplinary team working on interdisciplinary goals

Adapted from DeLisa 2004
Rehabilitation Settings

- Inpatient (‘Subacute’)
- Medical Outpatient Clinics
- Centre-based/Home-based therapy
- Private (TAC, Workcover, Private Health Insurance) or Public
- As close to home as practical
- Specific, centre of excellence
- In ‘catchment’
Streams of Rehabilitation

- Neurological
- Orthopedic
- Musculoskeletal, including chronic pain mx
- General – deconditioned

- Spinal (RTRH, CGMC)
- Amputee (CGMC, RMH, RTRH, St V’s, WH)
- Acquired Brain Injury (Secure Unit – RTRH, CGMC, Private)
- Burns (CGMC)
- Cardiac, Respiratory (often OP)

- Rural
Rehabilitation duration

• When does rehab start? When does it end?
• Need time (LOS)
• Need to follow up – issues change with time
• Lifelong reviews (spina bifida, spasticity post stroke, amp, MS)
• Return to work
• Return to drive
Triage and Assessment

• Who is appropriate?
• Who is ready?
• **WANT TO PARTICIPATE**
  - Consent
  - Motivated

• **CAN PARTICIPATE**
• **CAN LEARN**
  - Tolerate 3 hours of therapy per day
  - Medically stable
  - Psychiatrically stable
  - Cognitive ability (or potential) to learn and carry over

• **HAS GOALS**
  - Working towards something, functional gains in set time-frame
  - One of the goals is usually ‘returning home’

• **‘IS LOVED’/HAS ‘HOME’ TO GO TO**
  - Better prognosis
  - Carer training, reduce level of care needs
Goals

Goal setting is central to rehab

- ‘Patient-centred’, individualised
- ‘SMART’ goals
Goals

SMART

• **Specific**
• **Measurable**
  - FIM score change by discharge, decrease acute/overall LOS, prevent institutionalization
• **Achievable (Realistic)**
• **Relevant/Realistic**
• **Time-limited**
Rehabilitation programs

• Individualized and patient-centered
• Goal-orientated
• Time-limited

On the ward:
• Therapy time
• Family meeting
• Team meeting / Case conferences
Components of Rehabilitation

- Optimize health status;
- Prevent complications.
- Optimize abilities;
- Compensate for fixed activity limitations by acquiring new skills and strategies and altering the environment.
- Educate patient and family, train carers
- Maximize participation, facilitate reintegration into the community socially, psychologically and vocationally
- Follow up
Case of Mr B

• A 40-something billionaire industrialist whose avocational interest includes fighting crime at night in a cape, suffers thoracic level spinal cord injury with resultant paraplegia in alleged assault.
• What would his impairments, activity limitations and participation restrictions be? – a rehabilitation ‘problem list’
• **Impairments**: bilateral lower limb and truncal weakness, altered sensation, neurogenic bladder and bowel

• **Activity limitations**: inability to walk, run, jump, climb, shower, dress, incontinence

• **Participation restrictions**: loss of main role – can’t fight crime!
• Is he a rehab candidate?
• What type of rehab program?
• What will happen in rehab, the outcomes and follow-up?
• Yes!
• Admit as inpatient on a spinal rehab unit; 12-18 week program
• Treat symptoms (pain) and prevent complications (thromboembolic prophylaxis, pressure area care, monitor mood and adjustment)
• Close liaison with trauma surgeons
• Neuropsychology to exclude traumatic brain injury
• Educate patient and significant other, one to one meetings and family meetings – prognosis, sexual counselling, spasticity, pain and dysaesthesia, risk of AD, joint preservation
• Psychological support and counselling
• Bowel and bladder program (intermittent self-catheterisation, aperients)
• Mobilise – PT to achieve independent transfers, wheelchair
• PADL and DADL retraining with OT
• Home assessment – mods, equipment (WC accessible)
• On discharge, Indep with wheelchair based mobility, Indep PADLs, continent using medications and aids, home exercise program.
• As an outpatient
  - returns to driving (custom built modified vehicle with hand control)
  - returns to work as CEO (flexible hours, technological aids, wheelchair accessible environment, supportive staff)
  - Explore wheelchair based role in crime-fighting, liaising with Prof X’s team
• Lifelong follow up at spinal rehab clinic
Conclusion

- Rehabilitation is the process of returning a person to maximal physical, psychological, social and vocational functions.
- Once admitted into a rehabilitation program, the patient and family work together with a multidisciplinary rehabilitation team, to set individualised, ‘functional’ goals, which are achieved and measured in a set time frame.
- Medical management and multidisciplinary therapy aim to address: impairments; limitations in activities of daily living (disability); and participation restrictions in the person’s social role (handicap).
- All health professionals have a role in identifying and referring patients who will benefit from rehabilitation services.