The Role of Physiatry in the Care of Adults and Children with Hydrocephalus

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Who Are We?

- PHYSICAL MEDICINE
  & REHABILITATION

- PHYSIATRIST
  - FIZZ-E-AT-TRIST
  - FIZZ-I-A-TRIST
What is a Physiatrist?

- Physicians trained in the medical specialty of Physical Medicine and Rehabilitation
- American Board of Physical Medicine and Rehabilitation – 1947
- Recognized by the American Board of Medical Specialties
- Similar status as neurology, cardiology, surgery, etc.
- 4-year residency training
What is a Physiatrist?

- Diagnosis, treatment, and rehabilitation of neuromusculoskeletal disorders
- Rehabilitation of cardiopulmonary, oncologic, and other medically complex conditions that cause impairment and disability
- Think holistically
- Multidisciplinary team
Who We Are Not

- Psychiatrist
- Podiatrist
- Physiologist
- Physical therapy doctor
What is Medical Rehabilitation?

- The restoration of an individual to his/her greatest physical, psychological, cognitive, social, vocational, avocational, and educational potential.
What is Medical Rehabilitation?

- Incorporates a biopsychosocial model of intervention in addition to the medical model of diagnosing and treating the underlying cause of a disease.
What is Medical Rehabilitation?

- Goal-oriented team approach to the remediation of impairment, disability, and handicap
- Physiatrist, PT, OT, SLP, TR, SW, Nursing, Psychology
Focus on Function

- Physical Medicine & Rehabilitation is not a specialty defined by a single organ system or disease process.
- Our focus is on function.
World Health Organization

International Classification of Impairment, Disability, and Handicap (ICIDH)

1980
IMPAIRMENT

Results from organ pathology

Loss of anatomic, physiologic, or psychologic function, e.g., weakness, dementia, incontinence, aphasia
DISABILITY

- Results from an impairment
  - A restriction of ability to perform an activity, e.g., bathing, dressing, feeding, communication, ambulating
HANDICAP

Results from a disability

A disadvantage that limits fulfillment of a **role**, e.g., occupation, avocation, social integration
World Health Organization

The International Classification of Functioning, Disability, and Health

2002
Health Condition
Aging with Disability

- **Body Functions and Structures**
  - Sensorimotor
  - Cognition

- **Activities**
  - Physical activities and exercise
  - Feeding, grooming, working
  - Mobility in home and community

- **Participation**
  - Quality of life
  - Standardized self-report measures of self-care, self-esteem, and mobility

- **Environmental Factors**
  - Clinic
  - Home
  - Community
  - Work
  - Assistive technology

- **Personal Factors**
  - Age
  - Weight
  - Height
  - Gender
  - Ethnicity
  - Duration of impairment
Human Performance of Adult Disabled as the Measure of Rehabilitation

FUNCTION
- Optimal
- Self-sufficient
- Partially independent
- Partially dependent
- Totally dependent

Optimal Function ranges from birth to adult, with a peak at adulthood. Self-sufficient function follows with a slight decline post-adulthood. Partially independent function continues to decline into adulthood, with a significant drop at the retirement stage. Partially dependent function shows a sharp decline at the retirement stage. Totally dependent function remains constant from adulthood to death.
Rehab Settings

- Acute hospital
- Acute inpatient rehab
- Subacute
- Skilled-nursing facility
- Chronic hospital
- Outpatient
- Home
Disorders Amenable to Inpatient Rehabilitation

- Amputation
- Stroke
- Brain injury
- Post fracture
- Post orthopedic
- Debility
- Cardiac
- Multiple sclerosis
- Parkinson disorder
- Cancer
- Post-op spine
- Pulmonary
- Chronic pain
- Spinal cord injury
- Pediatrics
- NPH post procedure
Disorders Amenable to Outpatient Rehabilitation

- Spine pain
- Musculoskeletal disorders
- Gait disorders
- Peripheral nerve disorders
- Chronic pain (FMS, RSD)
- Osteoporosis
- Post polio syndrome
- Arthritis
- Spasticity
- Sports medicine
- Performing arts medicine
Physiatric Procedures

- Electrodiagnostic testing
- Interventional pain procedures
- Chemodenervation for spasticity (Botox, Phenol)
- Soft-tissue & joint injection

- Diagnostic musculoskeletal ultrasound
- Modified barium swallow
- Medical-legal evaluation
- Acupuncture
Specialty Programs/Resources

- Driver evaluation and training
- Gait lab evaluation
- Aquatic therapy
- Prosthetics/orthotics
- Wheelchair/seating
Criteria for Acute Rehab

- Medical stability
- Ability to tolerate minimum 3 hr/day therapy (PT, OT, SLP)
- Appropriate goals for inpatient setting
- Goals in at least 2 therapy disciplines, one of which must be PT
- Reasonable expectation progress will be made
Criteria for Acute Rehab

- Must need 24-hr rehabilitation nursing
- Must need ongoing medical oversight, usually 5 days/week
- Must have need to be in a “hospital”
Inpatient Rehab Goals

- Discharge to the community
- Length of stay usually <2 weeks
- Restore functioning
- Prevent complications
- Prevent re-admission
- Enhance recovery
Why Patients are Not Accepted for Acute Rehab

- Too good
- Too bad
- Too sick
- No money
- No home
Subacute Rehabilitation

- AKA “skilled nursing” service level
- This means nursing-home-level of care
- 1–3 hours of therapy per day
- Doctor may see patient once in 30 days
- Therapists may be contracted
Outpatient Rehab

- Hospital or freestanding clinic/center
- PT/OT/SLP/Neuropsych
- Access to vendors (orthotics, assistive devices)
- Can be fragmented if service is provided at different locations
NPH Gait Symptoms

- Unsteadiness
- Leg weakness
- Sudden falls
- Shuffling steps
- Difficulty taking the first step, as if feet were stuck to the floor; “getting stuck” or “freezing” while walking
Cognitive/Mental Status Changes

- Memory loss
- Speech problems
- Apathy (indifference) and withdrawal
- Changes in behavior or mood
- Difficulties with reasoning, paying attention, or judgment
Genito-urinary Symptoms

- Urgency
- Incontinence
- Incomplete emptying
Impairments

- Neurologic impairments
  - Motor control
  - Gait
  - Cognition

- Genitourinary impairments
  - Incontinence
Disabilities (Activity Limitation)

- Walking (mobility)
- Transferring (changing positions)
- ADLs
- IADLs
- Toileting
Handicap (Participation Restriction)

- Safety risk at home
- Fall risk
- Can’t work
- Unable to participate in hobbies
- Loss of social role
The Rehab Process

- Insure optimal neurological/neurosurgical treatment
- Assess for comorbidities that affect function
  - Arthritis, stroke, heart disease
- Determine what can be remediated and what needs accommodation
Remediation
What Can We Improve?

- Weakness
- De-conditioning
- Spasticity (increased muscle stiffness)
- Pain
Accommodation

- Imbalance – assistive devices, seated mobility
- Gait – assistive devices, braces, caregiver instruction
- Voiding – timed voids, straight catheterization, medication
- Cognition – focus on safety
THANK YOU