

## A New Discipline in Medicine, Physiatry: Physical Medicine and Rehabilitation

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### INTRODUCTION

Physical Medicine and Rehabilitation (PM&R) also referred to as Physiatry, pronounced fizzy-at'-tree, (1, 2) is the area of medicine which helps patients regain control of their lives by restoring function. Rehabilitation Medicine therefore treats patients who have experienced traumatic injury after surgery or disabling diseases including various musculoskeletal or nervous system conditions, chronic pain or movement problems. Treatment utilizes physical therapeutics and/or medications, non-invasive or minimally invasive methods and usually does not include surgery (1, 3, 4, 2). The major concern of the field is the ability of persons to function optimally within the limitations placed upon them by a disease process, for which there may be no known cure. The emphasis is to attempt to regain full restoration to the premorbid level of function where possible or optimization of the quality of life for those who may not be able to achieve full restoration.

An interdisciplinary team approach is used in patient care. The Physiatrists in collaboration with physical therapists, occupational therapists, speech and language pathologists, psychologist, doctors and other rehabilitation professionals (1, 3, 4, 5) create individualized therapy plans specific to the unique needs, abilities and objectives of patients (Figure).

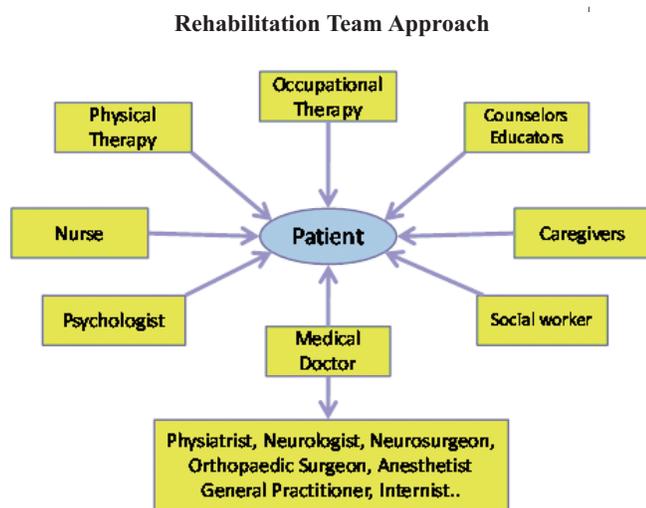


Figure: Interdisciplinary Team Approach Rehabilitation Patient Care

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### HISTORY

Physical Medicine and Rehabilitation was formally recognized as a specialty by the American Medical Association (AMA) with the establishment of the American Board of Physical Medicine and Rehabilitation (ABPMR) in February 1947 (4, 5, 6). Although the recognition as a specialty came in 1947, doctors practised Physical Medicine years before during World War I and II (WWI/WWII) in treating wounded soldiers and even before as seen in 1923 when the first "physical medicine" society was organized in the form of The American College of Radiology and Physical Therapy (4). Major Frank B Granger from the Medical Corps was instrumental in setting up reconstruction units in hospitals across the United States of America in 1917. Colonel Harry Mock and Dr John Coulter worked to treat soldiers with disabling conditions during WWI and during WWII. Howard Rusk furthered the establishment of rehabilitation programmes in hospitals for the Army Air Force. Dr Frank H Krusen along with the Mayo Clinic provided the first residency training programme for the Navy and Army doctors in 1936 (5) and he was later credited with coining the term "Physiatrist" in 1939. The origins of what became known as the American Academy of Physical Medicine and Rehabilitation (AAPMR) in 1956, was in a society which consisted of Radiologists and Physical Therapy Doctors; some of the latter were trained in Central Europe and Scandinavia (6) where physical therapeutics, hydrotherapy and spa treatment were well respected as a part of medical treatment (7). With the polio outbreak in 1952, Physiatry was further expanded and the field was converted from a military field to include the treatment of more civilians (3, 4, 6-10). In 1967, the Association of Academic Physiatrists (AP) was established as an organization of Physiatrists affiliated to training institutions (9).

In Great Britain, Rehabilitation Medicine also developed out of the need to treat disabled soldiers between the two World Wars. The International Federation of Physical Medicine and Rehabilitation held the second International Congress of Physical Medicine and Rehabilitation on July 14-19, 1952, after a long break following the first meeting in 1938 (8, 11). Rehabilitation Medicine was recognized as a specialty by the Royal College of Physicians in Great Britain in 1984 with the organization of Medical Disability Society in 1983, and later renamed the British Society of Rehabilitation Medicine in 1991 (10). It is to be noted that Rehabilitation Medicine had close ties with Rheumatology and both shared the same umbrella association, the British Association of Rheumatology and Rehabilitation until 1984 (10, 11).

Other countries had similar origins for rehabilitation medicine in response to wartime and Rehabilitation Medicine

was recognized as a specialty over the years: Australia in 1976 (12), New Zealand in 1995 (12) and Japan in 1996 (13).

In the Caribbean, the University College of the West Indies in Jamaica appointed the then Dr John Golding as Senior Lecturer in Orthopaedics in 1953. He was instrumental in introducing Rehabilitation to Jamaica. In 1954, Sir John Golding started the Mona Rehabilitation Centre, in response to the outbreak of polio. The Mona Rehabilitation Centre was renamed Sir John Golding Rehabilitation Centre and is still treating patients with disabilities to this day (14). A Lecturer in Physical Medicine and Rehabilitation and Consultant Psychiatrist was appointed at the University of the West Indies in 2008, where PM&R is now included in the curriculum for the medical and physiotherapy students.

### TRAINING

There are many accredited residency training programmes for Physical Medicine and Rehabilitation or Rehabilitation Medicine, and duration of residency training ranges from 4–6 years depending on the country, with the first 1–2 years spent as an intern or house officer (1, 12). At the end of residency training a written and clinical exam is done and certification is granted. The field has since evolved and now offers subspecialty fellowship training in; Musculoskeletal, Spine and Sports Medicine, Brain Injury, Spinal Cord Injury, Paediatric and Geriatric Rehabilitation (1, 9, 5).

### AREAS OF REHABILITATION

**Musculoskeletal Rehabilitation:** Treats acute and chronic athletic injuries, arthritis, motor vehicle injuries, physical injury, post surgery patients, de-conditioned patients, work related injuries, overuse injuries, overweight patients with obesity, elderly patients who are de-conditioned.

**Spine Rehabilitation:** Treats patients who have sustained injuries or have natural progressive degeneration of the spine with neck and back pain.

**Brain Injury Rehabilitation:** Treats patients after traumatic brain injury *eg* after motor vehicle accident, assault, falls; stroke; tumour (cancer, benign); brain injury after infection.

**Spinal Cord Injury Rehabilitation:** Treats patients after traumatic spinal cord injury after motor vehicle accident, assault, falls, stroke, degenerative illness of the spinal cord, tumour (cancer, benign), after infection *eg* meningitis, polio or other neurological illnesses.

**Neurological Disease Rehabilitation:** Treats patients with cerebral palsy, tropical spastic paraparesis (TSP), multiple sclerosis, diabetic peripheral neuropathy, *etc*.

**Spasticity Management Rehabilitation:** Treats patients with spasticity, stiffness in muscles which prevents free movement, coordination and function.

**Cardiac Rehabilitation:** Treats patients who have cardiac related illnesses, including myocardial infarction, congested heart disease or post cardiac surgery to facilitate recovery and minimized recurrence.

**Pulmonary Rehabilitation:** Treats patients with acute and chronic respiratory disease, including chronic obstructive pulmonary disease (COPD) and severe cases of asthma.

**Cancer Rehabilitation:** Treats cancer patients in an attempt to obtain maximal physical, social, psychological and vocational functioning within the limits created by the disease and its resulting treatment.

**Burn Rehabilitation:** Treats patients after acute phase and hospitalization, who will need rehabilitation for maintenance of range of motion and function which is critical during the initial stage of healing to prevent contractures of skin, muscles and disfigurement.

**Prosthetic and Orthotics:** Treats patients with upper or lower limb amputation who need prosthesis (artificial limbs) or patients needing orthosis, *ie* splints and braces, including patients with scoliosis or limb deformity.

### SUMMARY

Physiatry is a relatively new area of medicine worldwide and continues to evolve to meet the medical needs of patients. The fundamental goal of Rehabilitation Medicine is functional performance and quality of life. Lord Viscount Tedder stated, “that the greatest field of the specialty lay in the restoration of individuals to full physical fitness, for he said, *“life was not merely to be alive, but to be well”*.”

One of the highest awards in the AAPMR is the Frank H Krusen Award, and one of the awardees, Henry Betts and Joel Press, the founder of the Spine and Sports Rehabilitation Center at the Rehabilitation Institute of Chicago, say, *“Medicine adds years to people’s life, Physiatry adds quality to those years.”*

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