POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

PROSPECTUS

BOARD CERTIFICATION IN REHABILITATION MEDICINE

(To be effective from the year 2017)

BOARD OF STUDY IN MEDICINE

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This prospectus is made under the provisions of the Universities Act, The Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 2 of 2016 for Degree of Doctor of Medicine (MD) and Board Certification as a Specialist.

1. Introduction

The successful completion of post-MD (Medicine) training programme in Rehabilitation Medicine will entitle the trainee to be eligible for Board Certification by the Postgraduate Institute of Medicine as a Specialist in Rehabilitation Medicine.

Rehabilitation Medicine is the part of the science of medicine involved with the prevention and reduction of functional loss, activity limitation and participation restriction arising from impairments due to acquired or congenital chronic disease conditions or injuries in musculoskeletal, neurological, cardiac and respiratory systems; management of disability in physical, psychosocial and vocational dimensions; and improvement of function. The focus of the specialty is on persons with complex disabilities among all age groups of people ranging from children to elderly. Rehabilitation Medicine emphasises maximum possible restoration of the physical, cognitive, psychosocial and vocational functions of the person, the maintenance of health and the prevention of secondary complications of disability. The Consultant in Rehabilitation Medicine should possess the expertise in the holistic management of the effects of above disorders.

2. Entry criteria, selection process and intake

2.1 Entry criteria

- Applicants should have passed the MD (Medicine) examination.
- Applicants should not have already applied to be enrolled in the training programme in any other subspecialty or be already Board Certified in any medical field.

2.2 Selection Process

The candidates will be selected according to the merit based rank in the results of the MD (Medicine) Examination.

2.3 Number to be selected

The candidates will be informed, the number of positions available for post-MD appointments in Rehabilitation Medicine at the allocation meeting or before. The selected candidates would be provided with full and comprehensive details of the training programme. This would be available at the PGIM for perusal by prospective candidates prior to the allocation meeting.

3. Training outcomes at the end of the programme

The broad outcomes of the entire training programme are as follows:

a. Patient care
b. Medical knowledge
c. Interpersonal and communication skills
d. Professionalism
e. Evidence-based approach

By the end of the training period,

- the trainee will have the knowledge and skills to promote the health and wellbeing of people with disability, and will be aware of and understand the social and cultural factors which influence disability and their impact on the rehabilitation process.
- the trainee will be able to formulate a management plan that respects and includes the patient needs.
- the trainee will be able to assess and record the common psychological disorders, psychosocial and behavioural consequences commonly seen in disabling disorders, and also the corresponding contextual factors that influence activity and participation.
- the trainee will be able to coordinate the care of individuals with disabling conditions in a wide range of settings from the acute hospital environment to the individual's home in the community.
- the trainee will have the knowledge and skills necessary to work with rehabilitation teams in different settings, and within and across health, social and community based organisations.
- the trainee will have developed leadership skills such that they can deliver, manage and develop a rehabilitation service. These leadership skills are seen as key, without which trainees will not be able to take up a consultant role.
- the trainee will have an understanding of the ethical and medico-legal framework within which decisions are made and respect for how others' ethical, moral or religious frameworks affect their decision making.

4. Curriculum and Training Programme

An outline of the teaching-learning activities is given in table 1. *See detailed curriculum for broad content areas in* ***Annexure 1.***

Table 1. Teaching-learning activities in the training programme in Rehabilitation Medicine

Intended learning content	Place of teaching-learning activity
1. Principles of Rehabilitation Medicine	Rehabilitation Hospital, Overseas training centre
2. Core neurology	Neurology Unit
3. Pain management	Pain clinic and overseas training centre
4. Continence management	Rehabilitation Hospital, Neurology unit and overseas training centre
5. Pressure ulcer prevention and management	Rehabilitation hospital and Plastic surgery unit
6. Sexuality in disability	Rehabilitation Hospital, overseas training centre
7. Rehabilitation in energy restricting conditions (cardiac and respiratory)	Cardiology unit, Chest unit
8. Burn injuries	Plastic surgery unit
9. Psychology in Rehabilitation Medicine	Rehabilitation Hospital, Overseas training centre
10. Vocational rehabilitation	Rehabilitation Hospital, Vocational rehabilitation centres - Social services Ministry, Overseas training centre
11. Rehabilitation of the visually impaired, deaf and those with learning disabilities	Rehabilitation Hospital, Neurology unit, Paediatric neurology and rehabilitation units
Advanced competencies in Rehabilitation	
12. Musculoskeletal diseases/injury/surgery	Rheumatology unit, Rehabilitation Hospital, Orthopaedic unit and overseas training centre
13. Spinal injuries	Rehabilitation Hospital, Neurosurgery, Orthopaedics and overseas training centre
14. Brain injuries	Rehabilitation Hospital, Neurosurgery, Trauma Unit and overseas training centre
15. Stroke	Stroke Unit, Rehabilitation hospital, stroke clinic and overseas training centre
16. Muscle and nerve disease / injury	Neurology Unit, Rehabilitation hospital, Neurosurgery, plastic surgery and orthopaedics
17. Spasticity	Neurology Unit and Neurophysiology Unit
18. Amputee rehabilitation and prosthetics	Rehabilitation Hospital and Overseas training centre
19. Orthotics, specialised seating, wheelchairs and assistive devices	Rehabilitation hospital, Paediatric Rehabilitation Unit and Overseas training centre

20. Paediatric Rehabilitation Medicine- musculoskeletal and neurological conditions/disease/injury	Paediatric Rheumatology, Rehabilitation, Orthopaedic and Neurology Units, Overseas training centre

5. Training programme details and structure

The total duration of training is three years.
Local training - 24 months
Overseas training - 24 months

The date of Board certification will be three years from passing of MD (Medicine) examination.

5.1. Structure of the Training Programme

An outline of the Structure of the Training Programme is given in table 2. Specific learning out comes are given in **Annexure 2.**

Table 2 - Structure of the Training Programme

Stage and assessments	Rotation	Duration
Stage 1	**Rehabilitation Unit** - Introduction to Rehabilitation Medicine	**2 months**
	Neurology Unit - Core neurology, clinical neurology (Reinforcement of knowledge of 3 months neurology training in pre-MD period) and applied and therapeutic neurophysiology in rehabilitation	**2 months**
	Paediatric Neurology & Rehabilitation - Neurology of developing brain and introduction to paediatric rehabilitation. (Neurology 1 month / Rehabilitation 1 month)	**2 months**
APPRAISAL AFTER STAGE 1		
Stage 2	**Rehabilitation Unit** • Institutional rehabilitation, home/ community/vocational resettlement and follow-up of patients with spinal injuries,	**6 months**

	traumatic brain injuries, stroke, other neurological diseases, chronic musculoskeletal diseases, amputees, and orthopaedic surgery. • Physiotherapy, occupational therapy, speech and language therapy, Prosthesis and orthotics, wheelchair prescription and production • Coordinated care with Neuro-Trauma and Accident Service, stroke unit, Genito-urinary unit, Ear-Nose-Throat Unit, Ophthalmology unit and psychiatry unit (psychology in Rehabilitation Medicine). • Addressing sexual problems in disability. • Visits to rehabilitation facilities in Sri Lanka; community based rehabilitation; Vocational training for disabled; Networking meetings with Departments and Units relevant to rehabilitation e.g. Ministry of Social services, Directorates of Elderly and disability care;	
	Neurology unit Acute stage rehabilitation care in neurological diseases (including stroke unit), spasticity management, Pain clinic, Urodynamic clinic, Gastrointestinal unit, ENT and Eye.	**3 months**
	Paediatric Rehabilitation • Paediatric Rehabilitation unit **(3 months)** • Paediatric neurology unit **(2 months)** • Paediatric Orthopaedics unit **(15 days)** Special needs children programme; Special education, Paediatric orthotic units, NGOs: Cerebral palsy Lanka	**5 months and 15 days**
APPRAISAL AFTER STAGE 2		

Stage 3	Neuro-trauma unit - Brain and spinal injuries: neurosurgical management and acute stage rehabilitation	**15 days**
	Orthopaedics - acute stage management and rehabilitation of spinal and limb injuries	**15 days**
	Rheumatology - Rheumatological diseases and early rehabilitation, joint examination and injections (Reinforcement of knowledge of 5 weeks of rheumatology training in pre-MD period)	**30 days**
	Plastic surgery and burns unit Burns, Brachial plexus and hand injury and pressure ulcer care	**15 days**
	Post Cardiac disease rehabilitation	**15 days**
	Rehabilitation of patients with respiratory diseases	**15 days**
Stage 4	**Overseas training in Rehabilitation Medicine** Principles of Rehabilitation Medicine: Inpatients/outpatients management of rehabilitation patients with neurological and musculoskeletal diseases/injuries, pain management, exposure to learning disabilities, Paediatric neuro-rehabilitation, Functional and electrical stimulation, Gait analysis, vocational rehabilitation/return to work	**12 months (24 months for the first six trainees)**
PRE-BOARD CERTIFICATION ASSESSMENT		

The training programme will be administered by the Specialty Board in Rehabilitation Medicine and named trainers who will undertake educational supervision. The specialty board will coordinate rotations in liaison with the Director, PGIM and Chairpersons of relevant Boards of Study.

Training will be under the supervision of one main consultant in rehabilitation medicine (presently a consultant in Rheumatology and Rehabilitation) and a consultant in Neurology, in centres with a broad range of training opportunities recognized by the Board of Study for Senior Registrar training.

Training rotations specified in Stage 1 should be undertaken only in the given order. Stage 2 and 3 can be done in any order, within each stage. To commence overseas training specified in Stage 4, a trainee should have completed both stage 1 and 2 of the training programme and have successfully completed the appraisals at the end of each stage.

All the subspecialty attachments must be done under the supervision of Specialists (Consultants) in the respective fields. Both the trainer and the centre must be acceptable to the Specialty Board in Rehabilitation Medicine. The subspecialty rotations (*not in any particular order*) must be completed during Stage 3 for the prescribed durations and must be certified in the Portfolio by the respective trainer of each subspecialty.

5.2 Method of delivery and learner support system

a. Text book and journal-oriented theory knowledge
b. Patient-oriented discussions and case-based learning during ward rounds and clinics
c. Specialist clinics in movement disorders, epilepsy, stroke, amputee etc.
d. Monthly Journal Clubs, case presentations and specific topic discussions in training centres.
e. Monthly Clinical Forum and lectures of the College of Specialist in Rheumatology and Rehabilitation - Sri Lanka and the Association of Sri Lankan Neurologists and other relevant professional associations.
f. Annual Scientific Sessions of the Ceylon College of Physicians, Sri Lanka Medical Association, Association of Sri Lankan Neurologists and College of Specialists in Rheumatology and Rehabilitation - Sri Lanka

5.3 Training requirements

5.3.1 On-call commitment

The trainee will be expected to perform on-call duties at a frequency determined by the need of the centre of training.

5.3.2 Specialist referrals

The trainee could undertake to see referrals from other units under the supervision of the trainer.

5.3.3 Teaching

The trainee must gain experience in teaching undergraduates, postgraduates, nursing staff and ancillary medical staff, and must show evidence to that effect in the Portfolio.

5.3.4 Research project leading to a research paper

Successfully carrying out a research project is a *mandatory requirement* that needs to be fulfilled to be eligible to appear for the Pre-Board Certification Assessment (PBCA). The Research Project should be undertaken at the commencement of training. It should be a study which is either hospital-based or community-based relevant to rehabilitation medicine. It may be observational or interventional in type.

All aspects of the study have to be assessed and deemed to be satisfactory by the Specialty Board in Rehabilitation Medicine *before embarking on the proposed study*. Towards that end, a comprehensive project proposal has to be submitted to the Board within six months of entering the training programme and approval obtained, *prior to commencing the study*. The draft proposal (prepared according to **Annexure 3)** should be all-inclusive and detailed with all relevant particulars being included. The supervisor/s would be the Trainer/s of the relevant area of study. The submitted proposal will be evaluated by an evaluator and comments submitted to the Board **(Annexure 4).**

Once approved, it should be commenced within a period of two months after approval. Instructions to the supervisor is given in **Annexure 5.** The trainee through the supervisor should submit a progress report to the Specialty Board in Rehabilitation Medicine every six months using the form in **Annexure 6.**

All projects would need approval from a relevant Ethics Review Committee while interventional studies have to be registered with the Clinical Trials Registry.

The trainee is expected to submit the study for publication in a peer-reviewed journal. Either the published article or evidence of the study being accepted for publication should be provided to the Specialty Board in Rehabilitation Medicine. In the event that the trainee fails to get the study published, a comprehensive report on the completed study should be incorporated into the Portfolio according to the format in **Annexure 7.** Two examiners appointed by the Specialty Board in Rehabilitation Medicine will assess the completed project report based on the marking scheme in **Annexure 8** as part of the evaluation of the Portfolio.

5.3.5 Clinical Audit

The trainee is encouraged to do Clinical Audits and formally present them at the hospital where he or she is working during either the local or overseas training period. This is in addition to the prescribed Research Project (*see* 5.3.4). Documentary evidence of such audit presentations are to be included in the trainee's Portfolio.

5.3.6 Portfolio

The portfolio is a framework containing evidence of achievement of learning outcomes over time. This evidence is supplemented by the portfolio builders' reflections on their learning and can be used to provide feedback to the learner. The training portfolio should include evidence of specialized procedures, supervision of ventilated patients, assessment of brain death, outpatient clinic duties, subspecialty attendance, grand rounds, conferences, teaching courses, on-call commitments and teaching. The portfolio should be prepared and submitted according to the format indicated in **Annexure 9.** The portfolio must be built by the trainee and be up to date at all times during the training period including the overseas period. The portfolio will be regularly inspected and signed by the supervising consultant. The portfolio will have to be produced at the assessments.

Work place based assessments that should be included in the portfolio are:

- Mini-clinical examination (Mini-CEX) (**Annexure 10**):

Minimum of 5 which must include at least 1 each during rotations in Rehabilitation Hospital, Neurology, Paediatric Neurology and Paediatric rehabilitation. (Suggested list of topics is given in **annexure 11**)

- Case-based discussions (CBD) of patients with (**Annexure 12**):
  Minimum of 8, which must include at least 2 each during rotations in Rehabilitation Hospital, Neurology, Paediatric Neurology and Paediatric rehabilitation. (A suggested list of topics is given in **annexure 11**)

- Direct Observation of Practical Skills (DOPs) (**Annexure 13**):

Minimum of 5 which must include at least 1 each during rotations in Rehabilitation Hospital, Neurology, Paediatric Neurology and Paediatric rehabilitation. (A suggested list of topics is given in **annexure 11**)

5.3.7 Overseas training

Two years of training in clinical Rehabilitation Medicine in an overseas centre for Rehabilitation Medicine is an essential pre-requisite for Board certification as a specialist in Rehabilitation Medicine. The overseas centre in which the trainee proposes to train must be approved by the Board of Study in Medicine prior to commencing overseas training. The BOS in Medicine will approve only overseas centres that have been recommended by the Specialty Board in Rehabilitation Medicine. The trainee must submit details of the job description (weekly or monthly work schedule), training offer, and the facilities and training opportunities available at the proposed overseas training centre to the Specialty Board in Rehabilitation Medicine in order to obtain approval.

6. Trainers and Training Centres

A panel of Board-approved Trainers who are Board-certified Specialists with employment in the Ministry of Health or the Universities would carry out the training locally. Overseas training would be carried out by Consultants in Rehabilitation Medicine in centres approved for training.

a. Training in Rehabilitation Medicine

The training will be done in a centre recognized by the PGIM for training in Rehabilitation Medicine. The Trainer should be a Board-certified Consultant in Rehabilitation Medicine with a minimum of three years after Board certification. The training centre should possess the following minimum requirements: Rehabilitation wards for spinal injury, stroke, head injury and musculoskeletal diseases, out-patient rehabilitation clinics, access to physiotherapy, occupational therapy, speech therapy, vocational rehabilitation, psychiatric care, urologist care and plastic surgery care.

b. Training in Clinical Neurology

The training will be done in a centre recognized by the PGIM for training in Clinical Neurology. The Trainer should be a Board-certified Consultant Neurologist with a minimum of three years after Board certification. The training centre should possess the following minimum requirements: a Neurology ward, out-patient Neurology clinics, access to intensive care units and free access to CT scan, EEG and neurophysiology facilities in the same centre.

c. Training in Paediatric Rehabilitation Medicine and Paediatric Neurology

A paediatric hospital with board-certified rehabilitation specialist, Paediatric Neurologist and orthopaedic surgeon with at least 3 years' experience after Board certification will supervise the training in Paediatric Rehabilitation Medicine.

d. Training in Rheumatology

The centre should be recognized by the PGIM for training in Rheumatology. The trainer should be a Board-certified Consultant Rheumatologist with at least 3 years' experience after Board certification. Facilities outside the training centre (including the private sector) may be utilized by the trainer, with the approval of the Specialty Board in Rehabilitation Medicine and the Board of Study in Medicine, solely for enhancing the training experience.

e. Training in Neurosurgery

The centre should be recognized by the PGIM for training in Neurosurgery. The trainer should be a Board-certified Consultant Neurosurgeon with at least 3 years' experience after Board certification. Facilities outside the training centre (including the private sector) may be utilized by the trainer, with the approval of the Specialty Board in Rehabilitation Medicine and the Board of Study in Medicine, solely for enhancing the training experience.

f. Training in Orthopaedics

The centre should be recognized by the PGIM for training in Orthopaedics. The trainer should be a Board-certified Consultant Orthopaedics surgeon with at least 3 years' experience after Board certification. Facilities outside the training centre (including the private sector) may be utilized by the trainer, with the approval of the Specialty Board in Rehabilitation Medicine and the Board of Study in Medicine, solely for enhancing the training experience.

g. Cardiac rehabilitation

The training will be done in a centre recognized by the PGIM for training in Cardiology with a consultant in attendance. The Trainer should be a Board-certified Consultant in Cardiologist preferably with special interest in Cardiac Rehabilitation with a minimum of three years experience after Board certification.

h. Rehabilitation of patients with Chronic reparatory diseases

The training will be done in a centre recognized by the PGIM for training in Respiratory Medicine. The Trainer should be a Board-certified Consultant in Respiratory Medicine with a minimum of three years after Board certification.

i. Plastic Surgery

The training will be done in a centre recognized by the PGIM for training in Plastic Surgery with a consultant in attendance. The Trainer should be a Board-certified Consultant in Plastic surgery with a minimum of three years after Board certification.

j. Overseas training

The training centre, the trainer and the training programme should be approved by the Specialty Board in Rehabilitation Medicine. The overseas training **should** include the areas given below. Recommended percentage time to spend for each area is also indicated in the table 3 below.

Table 3. Recommended percentage time to spend for each area during overseas training

Area of study	Percentage of time recommended
Neuro-rehabilitation - *Traumatic brain injury, Stroke, Neuro-muscular diseases, pain and spasticity management*	50%
Spinal injury rehabilitation	12.5%
Amputee and musculoskeletal rehabilitation	12.5%
Paediatric rehabilitation	25%

7. Evaluation of progress

7.1. Progress Reports

7.1.1. Each completed section of the training programme should be followed by the submission of a Progress Report by the Supervisor/Trainer using the form in **Annexure 14**. These reports should be received by the PGIM within one month of completing the relevant section of training. *The onus of ensuring that these reports are sent in time to the PGIM is entirely on the trainee*. He or she should liaise with the trainers and make sure that the reports are received by the PGIM on time. This includes local as well as overseas training. Satisfactory Progress Reports are a mandatory requirement to qualify

for the Pre–Board Certification Assessment (PBCA).

Suitable and appropriate action will be taken by the Board of Study in Medicine with concurrence of the Specialty Board in Rehabilitation Medicine, according to the General Regulations and Disciplinary Code of the PGIM in the event of the receipt of an unsatisfactory or adverse progress report at any stage of training.

7.1.2. The trainee also should submit the completed Peer Team Rating (PTR) forms every six months **(Annexure 15).**

7.2. Appraisals to be done regularly during the training as of below

Formative assessments will be conducted with the objectives of evaluating whether the trainee is fit to proceed to the next stage of training, to identify deficiencies both in the training and the training programme and to agree on a plan of action to rectify any deficiencies by the next stage of training. This will be conducted in the format of RITA (Record of In Training Assessment) of the PGIM **(Annexure 16).**

a) At the end of stage 1 as indicated in 5.1

Trainers in Rehabilitation Medicine and Neurology both in adult and paediatric components together with one additional consultant each from rehabilitation medicine and neurology, to conduct a viva examination (6 examiners) of 45 minutes based on basic knowledge required to be acquired at this stage and the portfolio.

b) At the end of stage 2 as indicated in 5.1

The Appraisal will comprise one adult case and one paediatric case. Each case will be examined by a panel of 3 examiners comprising the Trainers in Rehabilitation Medicine and adult/paediatric Neurology, and one Consultant either from Rehabilitation Medicine or adult/paediatric Neurology who is not the trainer. The Appraisal will comprise of two components:

a. Assessment of observed history taking, examination, interpretation of physical signs and management of one adult and one paediatric patient. (30 minutes each)

b. Assessment of the training portfolio (20 minutes)

8. Pre–Board Certification Assessment (PBCA)

8.1. Eligibility to sit for the PBCA

The following criteria have to be accomplished to be eligible to appear for the PBCA.

a. Completion of the training period.
b. Provision of satisfactory Progress Reports and PTR Reports for *all* stages of training.
c. Completion of the research project and publication / acceptance for publication of the research paper in a peer-reviewed journal or submission of the research report.
d. Submission of the Portfolio using the prescribed format.

8.2. Details of PBCA

The PBCA will comprise an oral examination (*viva voce*) of 60 minutes, during which the trainee will be questioned on the portfolio. The PBCA aims to evaluate knowledge, clinical competence and depth of experience gained during the training programme. The trainee is required to start with a presentation of 10 – 15 minutes on the post-MD training.

The PBCA will be conducted by one Board-certified Rehabilitation specialist and one Board-certified Neurologist other than the trainee's Primary Trainers. The Primary Trainer may be an observer. The examiners will be appointed by the Specialty Board in Rehabilitation Medicine according to the rules and regulations of the PGIM.

8.3. Pass mark

The overall assessment will be based on each of the main sections in the portfolio (as specified in 5.3.6) and the performance at the *viva voce*, which will be assessed as satisfactory or not, on an overall basis.

8.4. Failed candidate

If the examiners are of the view that the trainee's performance at the PBCA is unsatisfactory, and the trainee should not be given immediate Board Certification, the examiners will provide the trainee with written feedback on how the portfolio should be improved in order to reach the required standard. The trainee should then re-submit the portfolio within a specified period of time (3 months), and face another PBCA (*viva voce*) based on the re-submitted portfolio. If the trainee is successful at this second PBCA, the date of Board Certification will be backdated as done routinely. If unsuccessful again, the date of Board Certification will be the date of passing the subsequent PBCA following further training for a minimum period of six months in a Unit allocated by the Specialty Board/Board of Study.

Ineligibility to sit the PBCA due to unsatisfactory progress reports will be dealt with as stipulated in 7.1.1.

9. Board Certification

A trainee, who has successfully completed the Pre-Board Certification Assessment is

eligible for Board Certification as a Specialist in Rehabilitation Medicine, on the recommendation of the Speciality Board in Rehabilitation Medicine and the Board of Study in Medicine.

10. Recommended learning material

Text books

Rehabilitation Medicine

a. International Classification of Functioning, Disability and Health, *WHO 2001*

b. Oxford Text book of Rehabilitation Medicine, *Dietz V, Ward N,*

c. Hand book of Rehabilitation Medicine, Greenwood *R, McMillan T, Barns M, Ward A.*

d. Rehabilitation for traumatic brain injury, *High W, Sander A, Struchen M, Hart K.*

e. Spinal Cord Injuries - management and rehabilitation, Sisto*, Druin, Sliwinski.,*

f. International Standards for Neurological Classification of Spinal Cord Injury*, revised 2011, published by the American Spinal Injury Association (ASIA)*

g. Physical Medicine and Rehabilitation, *Randall L. Braddom MD*

h. Delisa's Physical Medicine and Rehabilitation: Principles and Practice, *Two Volume Set.*

Neurology

i. Brain's diseases of the nervous system, Donaghy*, Michael. Oxford University Press*

j. Adam's and Victor's Principles of Neurology, *Ropper, Allan, Samuels Martin. McGraw-Hill*

k. Bradley's Neurology in Clinical Practice*, Darroff, Fenichel, Jankovic, Mazziotta. Saunders.*

Paediatric Rehabilitation

l. Oxford Text books of Palliative care for children

m. Pediatric Rehabilitation: Principles and practice, *Michal A Alexander & Dennis J. Matthews*

n. OT for children and adolescents, *Jane Case-Smith*

o. Nelson Text book of Pediatrics, *2-Volume Set,*

p. Partners in Movement, *by Vickie Meade*

q. Movement Disorders in Children / Emilio Fernandez-Alverez, Jean Aicadi, London: Mac Keith Press

r. Muscle Disorders in Childhood/ Victor Dubowitz, London :

s. Handbook of Botulinum toxin Treatment / Ed Peter Moore, Markus Naumann, Blackwell Science

Musculoskeletal Diseases

t. Oxford text book of Rheumatology
u. Macleod's clinical Examination
v. EULAR Text book of Rheumatology

Journals

Rehabilitation Medicine

a. *Clinical Rehabilitation,* British Society of Rehabilitation Medicine
b. *Advances in Clinical Neuroscience and Rehabilitation,* Whitehouse publishing
c. *Archives of Physical Medicine and Rehabilitation.* American Congress of Rehabilitation Medicine.
d. *Journal of the American Academy of Physical Medicine and Rehabilitation.* Elsevier

Neurology

e. *Practical Neurology.* BMJ Publishing Group.
f. *Journal of Neurology, Neurosurgery and Psychiatry*. BMJ Publishing Group.
g. *Lancet Neurology*. Lancet Publishing Group.
h. *Neurology*. American Academy of Neurology.
i. *Continuum*. American Academy of Neurology.
j. *JAMA Neurology*. American Medical Association.
k. *Brain*. Oxford University Press.
l. *Sri Lanka Journal of Neurology*. Association of Sri Lankan Neurologists.
m. *BMC Neurology*. Bio Med Central.
n. *Journal of Neurological Sciences*. Elsevier.
o. *The New England Journal of Medicine.* NEJM Group.
p. *The British Medical Journal.* BMJ Publishing Group.
q. *The Lancet.* Lancet Publishing Group.
r. *Ceylon Medical Journal.* Sri Lanka Medical Association.

Paediatric Rehabilitation

s. *Developmental Medicine and Child Neurology*
t. *Developmental Neurorehabilitation*
u. *Journal of Paediatric Orthopaedics*

Musculoskeletal Diseases

v. Arthritis and Rheumatism
w. Annals of Rheumatic Diseases
x. Bone

Websites:

Rehabilitation Medicine

a. http://www.who.int/classifications/icf/icf_more/en/
b. British Society for Rehabilitation Medicine: www.bsrm.co.uk
c. American Academy of Physical Medicine http://www.aapmr.org/
d. American Congress of Rehabilitation Medicine http://www.acrm.org/
e. Asia Oceania Society of Physical Medicine and rehabilitation http://www.aosprm.org'
f. International Society of Physical Medicine and Rehabilitation http://www.isprm.org/
g. World Federation for Rehabilitation Medicine http://wfnr.co.uk/
h. International Spinal Cord Society http://www.iscos.org.uk/
i. American Spinal Injury association http://asia-spinalinjury.org/
j. International Brain Injury Association http://www.internationalbrain.org/

Neurology

k. American Academy of Neurology: www.aan.com
l. Association of British Neurologists: www.theabn.org
m. World Federation of Neurology: www.wfneurology.org

Paediatric Rehabilitation

n. Paediatric rehabilitation- 2010 study guide http://www.archives-pmr.org/issues
o. American Academy for Cerebral Palsy and Developmental Medicine http://www.aacpdm.org/

Musculoskeletal Diseases

p. www.medscape.com/rheumatology
q. www.rheumatologylearning.com

11. The Curriculum Development Committee in Rehabilitation Medicine

Prof Senaka Rajapakse (Chairperson) - Consultant Physician, Deputy Director - PGIM
Dr Thashi Chang (Secretary) - Consultant Neurologist
Dr Duminda Munidasa (Convener) - Consultant in Rheumatology & Medical Rehabilitation
Dr Uditha Jayatunga - Specialist in Rehabilitation Medicine, United Kingdom
Dr Lalith Wijayaratne - Consultant in Rheumatology & Medical Rehabilitation
Dr Padma Gunaratne - Consultant Neurologist
Dr Nihal Gunatillake - Consultant in Rheumatology & Medical Rehabilitation
Dr Udaya Ranawaka - Consultant Neurologist
Dr Darshana Sirisena - Consultant Neurologist
Dr Gunendrika Kasthuriratne - Consultant in Rheumatology & Medical Rehabilitation
Dr JB Pieris - Consultant Neurologist
Prof Ranjanie Gamage - Consultant Neurologist
Prof Saman Gunathilake - Consultant Neurologist
Dr Bimsara Senanayake - Consultant Neurologist
Dr Sudath Gunasekera - Consultant Neurologist
Dr Gamini Pathirana - Consultant Neurologist
Dr K Salvin – Consultant Ophthalmologist
Dr Samanmali Sumanasena – Consultant Paediatrician
Dr Saraji Wijesekera – Consultant Paediatric Neurologist
Dr Thushan Beneragama – Consultant Plastic Surgeon
Dr Ajith Malalasekera – Consultant Urologist
Dr Mahesh Rajasuriya – Consultant Psychiatrist
Dr Narendra Pinto – Consultant Orthopaedic surgeon

ANNEXURE 1: CURRICULUM

1. Principles of Rehabilitation Medicine

Factual knowledge

- Concepts of impairment, disability, activity limitation and participation restriction
- International Classification of Functioning, Disability and Health
- The influence of medical, physical, psychological, social, educational, ethnic, cultural, vocational, gender and sexuality issues on the determination of disability, and their possible effects on the outcome of rehabilitation
- Current tools and systems for the measurement of impairment, disability and activity limitation or participation restriction
- describe the potential role and benefit of specific medical and rehabilitation therapies in the assessment and management of disability and activity limitation or participation restriction
- discuss the role of pharmacological treatments, including potential side-effects, in the management of impairment and disability
- describe the role of surgical interventions in the management of disability
- describe the role of physical therapeutic modalities in the management of impairment and disability
- describe the use of prosthetics, orthotics and adaptive equipment in the management of impairment and disability
- discuss the impact of disablement on the patient's family and the potential disturbance to family function:
  - need for support of the family during rehabilitation
  - influence of family dynamics on rehabilitation outcomes
- describe management of psychological factors affecting rehabilitation management, including adjustment disorders, depression, anxiety and cognitive/behavioural disorders
- describe the roles of government agencies, private organisations and volunteer groups in the community care and advocacy of persons with disability and activity limitation or participation restriction.
- summarise principles of organisation and management of interdisciplinary rehabilitation, including use of goal setting, care plans and critical pathways
- describe the roles and skills of members of the rehabilitation team, including:
  - other medical specialists
  - junior medical staff
  - rehabilitation nurse
  - occupational therapist

  - physiotherapist
  - speech and language therapist
  - social worker
  - clinical psychologist
  - neuropsychologist
  - vocational counsellor
  - prosthetist/orthoptist
  - other health professionals whose skills may assist rehabilitation
- outline management principles pertaining to:
  - staff selection, training, supervision and counselling
  - job descriptions, performance appraisal and professional development
  - staff motivation and team building
  - successful management of change
  - participation and leadership of meetings
  - effective negotiation skills
- define concepts of primary, secondary and tertiary prevention in the context of rehabilitation medicine
- describe patient factors contributing to illness and injury, including age, sex, fitness and lifestyle
- describe environmental factors contributing to illness and injury, including occupation, psychological factors, ethnic and cultural issues
- name current major preventive health programs relevant to rehabilitation medicine

Skills

- write a comprehensive and relevant patient history using appropriate interview techniques and conduct a clinical examination including physical, functional and cognitive assessments
- order and interpret relevant clinical and diagnostic investigations including radiological and electro diagnostic tests
- synthesise findings of history, clinical examination and investigations into a statement of the nature and extent of disability and activity limitation or participation restriction experienced by the patient and their family
- communicate outcome of assessment to the patient and family.
- formulate a rehabilitation management plan with goal setting, relevant to the patient's disability, potential for rehabilitation and available resources for rehabilitation therapy
- write medical or medico-legal reports to the referring source outlining results of

evaluation and recommendations for rehabilitation management.

- formulate a written rehabilitation care plan that specifies problems and goals, and includes the activities of medical and allied disciplines
- review patient progress in rehabilitation, revising problems and goals as necessary
- apply basic clinical procedures as required
- use appropriate venues for rehabilitation therapy, including inpatient, outpatient and community based resources
- use functional outcome measures in rehabilitation planning and management
- facilitate ongoing participation of patient and family in the rehabilitation program
- ensure constructive involvement and support of the family in planning and delivering rehabilitation
- communicate rehabilitation plan to the patient and family
- write adequate, timely and legible medical records
- review patient progress and rehabilitation goals.
- integrate rehabilitation management into wider framework of patient medical care through liaison and consultation with other medical practitioners
- communicate with and coordinate activities of the rehabilitation team through regular consultation and liaison
- identify and manage conflict arising during rehabilitation.
- apply management principles pertaining to:
  - staff motivation and team building
  - change management
  - personal time management
- demonstrate effective negotiation skills when communicating with colleagues, patients, their families, the medical community and the general community
- lead an interdisciplinary team, participate in team meetings and lead team meetings
- demonstrate effective personal skills in the leadership and management of the interdisciplinary rehabilitation team.
- identify and manage individual patient risk factors associated with potentially disabling illness and injury
- identify and modify environmental factors that may directly contribute to the development of illness and injury
- promote early and effective rehabilitation to limit the disabling consequences of illness and injury
- participate in the counselling and education of patients, their families, the medical community and the general community with regard to the prevention of illness and injury, and the importance of early rehabilitation

- promote the early identification and treatment of disability, including secondary physical and psychological disabilities.

Attitudes

- Awareness of the role of the Rehabilitation specialist as the team leader
- The prime importance of working as a team including the patient and the relatives
- Liaison with MDT and all other professionals involved in patient care
- Awareness of ethical and moral issues of medical rehabilitation
- To be aware of the needs of the patient, family and carers
- Understand and alleviate distress of the patient and family members
- Prognosticate functional limitations in a sensitive manner
- Awareness of the support networks

2. General Neurology

A. Generic Skills

Factual knowledge

- Applied anatomy and physiology of the central and the peripheral nervous system including the autonomic nervous system
- The clinical presentation of disorders affecting central and peripheral nervous system
- Localization of diseases within the nervous system
- focal disease affecting cerebral hemispheres, brain stem, spinal cord, cauda equina, nerve roots, nerve plexus, peripheral nerves, muscles, NMJ
- multi-focal disorders
- extrapyramidal disorders
- Metabolic and general medical disorders affecting the central and peripheral nervous system
- Neurological disorders that are likely to lead to disability
- The principles of management of neurological disorders
- The mechanisms whereby psychological, social, behavioural factors and social circumstances can produce and modify the presentation of patients with physical symptoms

Clinical Skills

- The ability to conduct a clinical interview to establish a diagnosis and a therapeutic relationship
- Able to perform a neurological examination appropriate to the clinical situation
- Obtain data for diagnosis and problem formulation

- Able to formulate an appropriate management plan for neurological disease.
- Provide a firm basis for education and management
- Able to discuss difficult issues including breaking bad news, dealing with the hostile, distressed or psychologically disturbed patient, obtaining informed consent
- Able to establish effective relationships with other members of the clinical team, provide clinical leadership and delegate where appropriate
- Able to accept appropriate management and responsibility
- Deal with complaints
- Write medico legal reports
- End-of-life issues

Attitudes

- The prime importance of an doctor-patient relationship
- Awareness of ethical and moral issues of neurology
- Awareness of the role of the neurologist as a part of the clinical team.

B. Rehabilitation in Neurological disorders

Factual knowledge

- Neurological disorders that are likely to lead to disability
- Traumatic conditions with associated neurological disability
- Common psychological disorders particular those frequent in disabling disorders
- Pathophysiology, drug and non-drug management of various specific impairments including neurological respiratory failure, spasticity, ataxia, LMN weakness, dysphagia, disorders of speech and language, cognitive dysfunction including perception, memory, attention, concentration, sequencing, planning and executive functions, sensory impairment due to visual and hearing loss, neuropsychological dysfunction including the common patterns of these disorders and the behavioural consequences of these deficits, bladder and bowel dysfunction, sexual dysfunction and subfertility
- Complications arising from the treatment of neurological conditions including the late complications of radiotherapy and chemotherapy
- Long-term sequelae of neurogenic bowel and the role of surgical intervention and functional electrical stimulation in the management of neurogenic bowel
- Long-term sequelae of neurogenic bladder and the role of intra-vesical anticholinergics and botulinum toxin in the management of the neurogenic bladder, Role of surgical intervention and functional electrical stimulation in the management of neurogenic bladder
- The consequences of pregnancy on neurological conditions including epilepsy

- Long-term sequelae of ageing in stable neurological conditions
- Different ventilatory techniques including the use of assisted cough in muscular dystrophy patients
- Needs of the individual patient with disability undergoing different types of transition, e.g., childhood to adult hood, entering and leaving the workplace
- Different treatment options and resources; both drug and non-drug, available for psychiatric disorders, and cognitive deficits (including post-traumatic amnesia)
- The pathophysiological basis of dysphasia, articulatory dyspraxia and dysarthria
- An understanding of the impact of a range of communication difficulties and strategies for compensating and managing these deficits
- Awareness of common outcome measures used in rehabilitation settings – Barthel score, Berg balance, Rivermead Mobility, J mar scores, 9 hole PEG tests, BIT/COPE scores, Hospital Anxiety Depression (HAD) scores, Addenbrooke Cognitive Examination scores, JFK coma recovery scale, Ashworth scale for spasticity, Functional Independence Measure (FIM), Weastmead PTA Scale, Mini-Mental State Examination (MMSE), Montreal Cognitive Assessment (MOCA)
- Awareness of disability rights and legislation

Skills

- Holistic management responsibilities of acute, rehabilitation and discharge phases of the patient journey
- Performance and interpretation of a range of common neurophysiological, neuroradiological and neuropsychological tests
- Long-term holistic management approaches for specific impairments including spasticity, respiratory failure and need for long-term ventilation, pain, pressure sores, contractures, limb and spinal deformity.
- Non-pharmacological treatment options for disabling disorders include role of surgery education, self-management, occupational therapy, physiotherapy, exercise and rest, safe injection techniques, orthotics and splinting, Identification of appropriate orthoses for use in the upper and lower limb, assistive devices and environmental adaptation
- Optimising best rehabilitation outcomes in Multidisciplinary teams (MDTs); working and leading such teams; conducting Multidisciplinary Team Case Conferences
- Care plan meetings with patients and families. To be able to reach rational rehabilitation goals
- Choosing the most appropriate approach to managing a person with a cognitive disorder or a behavioural disorder.

- Standard and interventional approaches to pain management
- Methods of assessing neurogenic sexual dysfunction and fertility; pharmaceutical and other treatments of sexual dysfunction
- Identification of the place of surgical intervention and Functional Electrical Stimulation (FES) for use in affected upper and lower limbs
- Good communication skills to optimise patient outcome within and outside rehabilitation wards, social services and other organisations.
- Gait analysis for complex mobility problems
- Environmental controls assessments to enhance quality of life
- Write patient discharge summaries and other reports including medico-legal reports
- Assessment of Nutritional needs of patients with disability
- Management of swallowing disorders including Nasogastric and PEG feeding

Attitudes

- To be aware of the needs of the patient, family and carers
- Liaison with MDT and all other professionals involved in patient care
- Understand and alleviate distress of the patient and family members
- Awareness of ethical and moral issues
- Prognosticate functional limitations in a sensitive manner
- Awareness of the support networks
- Awareness of need for genetic testing and counselling

C. Knowledge, clinical skills and attitudes in relation to the pathophysiology, diagnosis, investigation, management, follow-up and rehabilitation of the following:

- Hydrocephalus
- Raised intracranial pressure
- Epilepsy in adults and in children
- Head injury and intracranial haemorrhages
- Stroke
- Demyelinating disorders of the CNS
- Disorders of the autonomic nervous system
- CNS infections
- Brain and spinal cord tumours in adults and in children
- Parkinsonism and movement disorders (including tremor, chorea, tics, myoclonus and dystonia)
- Spinal cord and root dysfunction (including compressive and non-compressive myelopathy and radiculopathy)

- Peripheral neuropathy (acute and chronic, including Guillain-Barre syndrome and post-polio syndrome) and common mononeuropathies (including median, ulnar, radial, common peroneal, facial and oculomotor nerves)
- Neuromuscular disorders
- Muscle disease (inherited and acquired)
- Motor neurone disease
- Neuro-ophthalmological disorders
- Dementia
- Neuroimmunological disorders
- Neurogenetic disorders
- Neuroendocrine disorders
- Neurootological disorders
- Neurotoxicological disorders
- Neurourological disorders
- Prolonged disorders of consciousness
- Cerebral palsy and cognitive impairment
- Macro- and microcephaly
- Developmental disorders

3. Pain

Factual knowledge

- Physiology of pain and pain pathways
- Pathophysiology and mechanisms of generation of pain with a special reference to neuralgic pain, phantom limb pain and post stroke shoulder pain
- Investigation of pain
- Drugs used in pain management
- Other therapies in management of pain including Cognitive Behavioural Therapy (CBT)
- Trigeminal neuralgia, post herpetic neuralgia, radicular pain and painful neuropathies
- Complex regional pain syndrome

Clinical skills

- Be able to obtain an accurate pain history to diagnose pain syndromes
- Examine a patient with painful conditions to arrive at a diagnosis with minimal discomfort to the patient
- Plan the management strategy for intractable pain syndromes including the ability perform simple intra-articular injections

- Ability to identify pain related behaviour and dependence

Attitudes

- Be sensitive to the suffering of patient and family
- Coordinate with other specialists in management of pain
- Be aware of complementary remedies for pain

4. Continence management

Factual knowledge

- Anatomy of neuro-continence pathways
- Physiology and anatomy of micturition (and sexual function)
- Types of bladder dysfunction in neurological conditions
- Types of bowel dysfunction in neurological conditions
- Pathophysiology of neurogenic bladder (and sexual function)
- Long term sequelae of neurogenic bladder
- Investigation of neurogenic bladder including urodynamics (and sexual dysfunction)
- Drugs used in neurogenic bladder (and sexual dysfunction)
- Complications due to bladder and bowel dysfunction
- Awareness of impact on bladder and bowel issues on other bodily systems

Clinical skills

- Assessment of types of incontinence
- Interpretation of urodynamics
- Monitoring and investigation of long term bladder function
- Bladder management methods: simple training regimes, pelvic exercises, use of incontinence management devises, electrical stimulation, drugs, types of catheterisations (self-intermittent/ urethral/ supra-pubic), Botulinum toxin uses, simple and complex bladder surgical options, advanced electrical stimulation systems.
- Bowel management methods: simple advice, regular bowel evacuation techniques, laxative regimes, enemas, bowel irrigations, surgical options
- Management of complications due to bladder and bowel incontinence

Attitudes

- Impact of continence issues on the patient and family
- Social isolation and quality of life issues
- Awareness of own limitations in management

- Awareness of the impact of continence nurses and other support services including carer issues
- Awareness of the availability of continence and urological services to optimise patient care

5. Pressure ulcer prevention and management

Factual knowledge

- Pathophysiology of pressure ulcers
- Identification of pressure areas
- Risk factors for pressure ulcers
- Prevention and treatment options of skin breakdown

Skills

- Skin assessment and risk evaluation for pressure ulcers
- pressure area care:
  - pressure relief of critical areas
  - management of skin breakdown

Attitudes

- Awareness in importance of pressure ulcer prevention
- Motivation of the team for prevention of pressure ulcers
- Early detection and treatment of skin breakdown

6. Sexuality in disability

Factual knowledge

- Physiology and anatomy of sexual function
- Types of sexual dysfunction in neurological conditions
- Pathophysiology of sexual function
- Counselling and sex education methods of the patient and the partner
- Drugs and other forms of treatment used in sexual dysfunction
- Pregnancy in disabled person

Clinical skills

- Assessment of types of sexual dysfunction
- Management methods of sexual dysfunction: Counselling, sex education, medications, devices and surgical methods

Attitudes

- Impact of sexuality issues on the patient and family
- Social isolation and quality of life issues
- Awareness of own limitations in management
- Awareness of the impact and availability of counselling and other support services

7. Rehabilitation in energy restricting conditions(cardiac and respiratory)

Factual knowledge

- basic knowledge of cardiac and respiratory disease
- methods of assessment of a patient presenting with cardiac/respiratory disease and evaluate functional capacity and the potential for rehabilitation
- methods of formulating a cardiac/respiratory rehabilitation program

Skills

- Recall basic knowledge of cardiac/respiratory disease
- Complete a comprehensive assessment of a patient presenting with cardiac/respiratory disease and evaluate the functional capacity and potential for rehabilitation
- Formulate a cardiac/respiratory rehabilitation program
- Provide acute/subacute hospital care and post-discharge care and to a patient with cardiac/respiratory disease with view for maximum functional capacity

Attitudes

- Working in close relationship with the specialist in cardiology/respiratory medicine
- Awareness of impact of energy restricting diseases on the patient's economy, family relationships and social activities.

8. Rehabilitation after Burn injuries

Factual knowledge

- Pathophysiology of burn injuries and its healing process
- Complications and prevention of complication after burn injuries
- Surgical management of burn injuries
- Rehabilitation methods of problems after burn injuries

Skills

- Prevention and management of complications after burn injury
- Plan out a rehabilitation programme for a patient after a burn injury

Attitudes

- Understanding psychological effects of a burn injury
- Awareness of social stigma after a burn injury
- Effects of above on rehabilitation programme of the patient

9. Neuropsychology

Factual knowledge

- Common psychosocial issues associated with conditions needing Rehabilitation Medicine.

a. At home and at work
b. Sexual, occupational, recreational and other issues

- Relevance of stigma, discrimination, stereotypes and prejudice in relation to conditions needing Rehabilitation Medicine.
  a. Stigma, discrimination, stereotypes, prejudice, culture, labelling, power, culture change, distress (vs. clinical depression)
  b. Practical application
- Reaction of patient and family, including grief, to occurrence of conditions needing Rehabilitation Medicine.
  a. Types of losses
  b. Ways and stages of grief
- Role of personality on sick role and illness behaviour.
- Common psychiatric issues and how specialists can help.
  a. Anxiety, depression, and delirium
  b. Other psychiatric illnesses
  c. Patient and family members
  d. Refer and manage in liaison
- Role of psychology on perception of pain.
  a. Emotions, culture/ subculture
  b. Perception of and coping with pain
- Importance of therapeutic relationship in Rehabilitation Medicine.
- Common psychological/ transcendental/ meaning of life issues encountered by self, team members and family members.
  a. Spiritual/ existential issues
  b. Death/ disability/ loss of importance as a person and related anxiety
- Role of psychological cognitive remediation in brain damage.
- Knowledge of variety of neuropsychological assessments to identify attention, concentration, planning/ organisation, visual/visuospatial and auditory memory functions, multi-tasking, immediate and delayed memory.
- To recognise the patterns of cognitive recovery.
- Knowledge of post-traumatic and retrograde amnesias, PTSD, post-concussion syndrome
- Role of cognitive remediation (i.e. behavioural treatment that uses drill and practice, compensatory and adaptive strategies to facilitate improvement in targeted cognitive areas like memory, attention and problem solving) in Rehabilitation Medicine.
- Role of mirror visual feedback for the treatment of conditions such as phantom pain, hemiparesis from stroke and complex regional pain syndrome.

- Child development and other stages of life and relevance in Rehabilitation Medicine.

Clinical skills

- Recognise and manage common psychosocial issues associated with conditions needing Rehabilitation Medicine.
- Recognise and address stigma, discrimination, stereotypes and prejudice in relation to conditions needing Rehabilitation Medicine.
- Recognise and address grief and other reactions in response to occurrence of conditions needing Rehabilitation Medicine.
- Evaluate and address personality issues.
- Recognise psychiatric issues and refer to specialists.
- Advise on non-physical ways to deal effectively with pain.
- Recognise and address problems in therapeutic relationships.
- Recognise and address common psychological/ transcendental/ meaning of life issues encountered by self, team members and family members.
- Apply cognitive remediation techniques in Rehabilitation Medicine. To recognise the impact of cognitive functions on family, social and employment issues.
- Management of PTSD, post-concussion syndrome
- Formulation of cognitive and behavioural interventions in consultation with the neuropsychologist.
- Carry out and train other therapists on mirror visual feedback for the treatment of conditions such as phantom pain, hemiparesis from stroke and complex regional pain syndrome.
- Adapt practice appropriately when dealing with children and adolescents and other special groups.

Attitudes

- Understanding there is a complex and critical interrelationship between neurological conditions, their sequelae/ impact and the patient as a whole and family as a unit.
- Conceptualisation of the relevance of a truly multidisciplinary team approach in Rehabilitation Medicine resulting in genuine respect for other colleagues, allied health workers and supportive staff.
- Broadening the range of therapeutic options in rehabilitation to include unfamiliar and familiar strategies of intervention.
- Realising humans in various stages of life may differ significantly in many aspects of behaviour.

10. Vocational rehabilitation

Factual knowledge

- Impact of disability on employment
- Impact of physical limitations
- Impact of cognitive limitations
- Impact of environmental and travel limitations
- Impact of disability on driving a vehicle

Clinical skills

- Recognise physical limitations impacting on work
- Ability to request neuro-psychological assessment to document specific cognitive deficits
- Recognise the cognitive limitations and ability to advice of its impact to the patient and employers to make reasonable allowances
- Recognise the need for vocational rehabilitation training and to organise a return to work program
- Ability to advice on prognostication of return to work.
- Recognise the need for a work place assessment with regards to access

Attitudes

- Ability to recognise the impact of disability on work, financial, social and family life
- Recognise the retaining options
- Recognise the need to liaise with the employers, occupational health, insurance schemes, social services
- Understanding of other voluntary sector options if patient is unable to return to work

11. Rehabilitation of visually impaired, deaf and persons with learning disabilities

Factual knowledge

- Pathophysiology of visual impairment, deafness and Learning disabilities
- Awareness of impact of associated underlying conditions on other systems
- Awareness of alternative communication techniques for the deaf and the blind

Clinical skills

- Assessment, investigation of above
- Ability to assess totality of disability spectrum holistically
- Management of associated medical issues such as spasticity and epilepsy
- Ability of prescribe/organise for assistive devices

Attitudes

- Recognition of social stigma and isolation of these patients
- Awareness of supportive services available and appropriate signposting

- Awareness of care facilities for severely impaired patients
- Awareness of the charities
- Help them to have autonomy and have productive lives
- Advice on their rights and access their entitlements

12. Advanced competencies: Rehabilitation after musculoskeletal diseases/injury/surgery

Factual knowledge

- Summarise aspects of common musculoskeletal diseases (inflammatory and non-inflammatory) and injuries, including:
- aetiology
- epidemiology
- pathophysiology
- natural history
- clinical features, including pain and dysfunction
- diagnostic investigations
- treatment modalities
- psychosocial issues
- Rehabilitation aspects of common musculoskeletal diseases (inflammatory and non-inflammatory) and injuries, including injury and dysfunction related to work and sport
- describe assessment of functional capacity
- describe the use and interpretation of diagnostic test, including:
- plain x-rays
- CT Scans
- diagnostic ultrasound
- MRI
- myelography
- joint aspiration
- describe pharmacotherapy, including indications, side effects and contraindications
- simple and compound analgesics
- nonsteroidal anti-inflammatory drugs
- opioids
- antidepressants and anti-neuritic medication
- topical rubefacients and anti-inflammatory drugs
- skeletal muscle relaxants
- anti-rheumatic medication

- intra-articular and soft tissue injections of corticosteroid and local anaesthetic
- drugs used in the management of osteoporosis
- explain therapeutic physical modalities, physiological effects, effectiveness, indications and contraindications of:
- local heating and cooling
- ultrasound
- interferential therapy
- short-wave diathermy
- traction
- transcutaneous electrical nerve stimulation
- acupuncture
- mobilisation and manipulation of peripheral and spinal joints
- describe the role of rest and exercise, including:
- role of rest in treatment of acute injury and illness
- negative effects of prolonged rest and disuse on musculoskeletal system
- role of prescribed/structured exercise for stretching, strengthening, posture correction
- principles and techniques of general fitness training and functional restoration
- outline the importance of patient education and active patient participation rehabilitation
- describe orthoses and aids, including:
- the biomechanical effects of orthoses applied to the musculoskeletal system
- rational prescription of aids and orthoses in the management of acute and chronic musculoskeletal disorders
- discuss surgical intervention, including indications, benefits and adverse effects of surgical intervention in the management of acute and chronic musculoskeletal dysfunction
- summarise rehabilitation methods following orthopaedic, neuro-surgical and plastic surgical intervention

Skills

- take a comprehensive history of the patient's symptoms and disability
- assessment of patient's perception of the nature of the disability, patient's expectations of future treatment
- undertake a comprehensive and relevant physical examination identifying anatomical and pathological basis of patient's pain/dysfunction,
- identify relevant impairments and disabilities related to the musculoskeletal system
- select and review appropriate investigations

- formulate a rehabilitation management plan based on diagnosis, specifying necessary further medical and other modalities of assessment and treatment
- undertake basic procedural skills, including injection for pain/dysfunction of joints, tendons, ligaments, bursae, entheses and • trigger point injection
- communicate diagnoses and management plans to patients and family in clear and appropriate terms
- communicate promptly and appropriately with referring agencies and any other health professionals involved in the care of the patient
- communicate with patients about prevention of further injury, and strategies for safe return to work, sport and domestic activity

Attitudes

- Understanding that the primary focus of medical rehabilitation is the functional outcome of the patient
- Importance of team care and involvement of patient and family in care decisions
- Awareness of socio-economic issues related to disability

13. Advanced competencies: spinal injuries rehabilitation

Factual knowledge

- Epidemiology, aetiology and classification of spinal cord injury
- Long-term sequelae of neurogenic bowel
- Long-term sequelae of neurogenic bladder
- The methods of assessing sexual function and fertility
- The effects of pregnancy in spinal cord injury
- Long-term sequelae of ageing in spinal cord injury
- Long-term sequelae of ageing in stable neurological conditions
- Pathophysiology and clinical features of sleep apnoea in spinal cord injury
- Long-term sequelae of respiratory dysfunction such as pulmonary hypertension, thromboembolic disease and restrictive lung disease
- Effects of spinal deformity on respiratory function
- Knowledge on the current research/evidence on stem cell transplant

Clinical skills

- Examination of a patient with spinal cord injury using the ASIA scale
- Requirements of basic annual assessment
- The level of upper limb function expected at different levels of cord injury
- Assessment and the management of spasticity, including botulinum toxin injection
- Assessment process for intrathecal baclofen (ITB)
- Management of complications of ITB

- Management of respiratory dysfunction in acute and chronic spinal injury including the management of tracheostomy/assistive ventilation
- Effect associated injuries
- Prognosis and functional level expected from the ASIA in an appropriate manner
- Recognition and management of autonomic dysreflexia
- Interpretation of urodynamic studies
- Prescription of appropriate orthosis, FES
- Management of tissue viability issues including surgical debridement, vacuum pump dressings and maggot therapy
- Management and of pressure ulcers including the use of appropriate dressing and correction of nutritional deficiencies
- Management of wheelchair issues including pressure relief, types of powered controls and other adaptations
- Prevention of pressure ulcers by regular weight shifting and using pressure relief mattresses
- Prescription of a bowel management regime for Spinal Cord Injury patients
- Prescription of a bladder management regime for patients with spinal cord injury including decisions on intermittent self-catheterisation, supra pubic catheters and prevention/treatment of urinary tract infections
- Management of erectile dysfunction and the harvesting of sperm in spinal cord injury
- Return to work and driving following spinal cord injury including work place and vehicle modification (e.g. hand control vehicles)

Attitudes

- Understanding of psycho-social impact of SCI
- Recognition of the needs of the individual with SCI undergoing different types of transition, e.g., childhood to adult hood, entering and leaving the workplace
- Awareness of the need to monitor life long
- Awareness of measures for the prevention of SCI

14. Advanced competencies in brain injury

Factual knowledge

- Epidemiology and pathophysiology of brain injury
- Sequelae of traumatic brain injury
- Presentation to rehabilitation services
- Main stages of rehabilitation
- Emerging from coma and post-traumatic amnesia

- Prolonged coma and vegetative states
- Promoting continence
- Motor function and control
- Sensory disturbance
- Cognitive, emotional and behavioural management, neuro-psychometric evaluations
- Post-traumatic stress disorder
- Post-concussion syndrome
- Leisure and recreation
- Computers and assistive technology
- Driving regulations
- Vocational/educational rehabilitation

Clinical skills

- Positioning and handling
- Managing epileptic seizures
- Rehabilitation and MDT management
- Coordination and communication
- Optimising respiratory function
- Management of swallowing impairment
- Maintaining adequate nutrition and hydration
- Effective bladder and bowel management
- Establishing basic communication
- Communication and language interventions
- Optimising performance in daily living tasks
- Management of behavioural dysfunction, agitation and insomnia following TBI
- Management of sexual/erectile dysfunction following TBI
- Organising return to work/study/driving following TBI

Attitudes

- Awareness of the long-term impact for the patient and his family
- Awareness of cognitive, behaviour and mood impact worsening physical disability
- Awareness of social impact of TBI
- Awareness of input by other professionals outside the MDT team to optimise holistic management- neurosurgery, neuro-ophthalmology, general/trauma surgery, orthopaedic surgeons, endocrinologists, enteral feeding teams, care teams, social workers, occupational health, insurance companies, employers

- Planning of complex discharges acknowledging the importance of their commitment to the process
- Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises
- Provide guidance and direction for others using the skills of team members effectively
- Review performance of the team members to ensure that planned service outcomes are met
- Recognise the common purpose of the team and respect team decisions

15. Advanced competencies in stroke in acute and rehab stages

Factual knowledge

Acute stage

- Stroke classification
- Acute stoke management/ investigations/ monitoring/ pathways
- Thrombolysis, surgical and neuro-radiological vascular interventions, carotid endarterectomy, medical management, other surgical interventions
- Secondary prevention of stroke
- Positioning and mobilisation
- Swallowing, nutritional state, hydration, continence
- Prevention of DVT/PE, pressure sores, contractures

Rehabilitation stage

- Motor control
- Sensations including neglect
- Post-stroke Pain
- Communication disabilities and treatment technologies
- Swallowing and nutrition
- Continence
- Visual impairment
- Sexual dysfunction
- Depression, anxiety, emotionalism, fatigue
- Psychological, cognitive, behavioural evaluations
- Work and leisure
- Organisational issues around acute stroke management, inpatient and community rehabilitation
- Stroke outcome measures
- Assessment of home environment including access to toileting

- Speech therapy for aphasia

Clinical skills

- Analysis of gait and balance
- Management of tone and spasticity, including botulinum toxin injection
- Prescription of splinting and FES
- Use of routine stroke related outcome measures
- Bladder and bowel management
- Prescription of assistive devices
- Management of swallowing impairment and insertion/management NG/PEG feeding
- Assessment of speech impairment including classification of Aphasia
- Assessment and management of visuo-spatial neglect
- Assessment of visual impairment following stroke and educating on compensatory mechanisms
- Assessment of return to driving following stroke

Attitudes

- Awareness of psychosocial impact of stroke
- Awareness of issues on community integration, environment/adaptations and driving
- Awareness of cognitive, behaviour and mood impact worsening physical disability
- Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises

16. Advanced competencies in muscle and nerve disease

Factual knowledge

- Applied anatomy and physiology of the nerve and muscle
- Clinical evaluation of diseases affecting nerve and muscle (including weakness, fatigue, atrophy, muscle hypertrophy, muscle weakness, sensory symptoms, pain, fasciculations, neuropathies, myopathies, peripheral neuropathies, motor neuron disease)
- Focal neuropathies (including anterior horn cell, spinal radiculopathies, mononeuropathies)
- Generalized neuropathies (including hereditary and infectious neuropathies, neuropathy in critically ill patients, alcohol neuropathy and toxic neuropathy)

- Myopathies (including genetic/heritable disorders of muscle, congenital myopathies, metabolic muscle disorders, myotonic muscular dystrophy, and other muscular dystrophies, and acquired myopathies)
- Surgical interventions in muscle disease
- Sleep hygiene and related symptomatology
- Drugs and toxins affecting neuromuscular transmission
- Complex seating needs
- Mobility assistive devices
- Genetic counselling and referral to genetic services

Clinical skills

- Management of scoliosis
- Monitoring cardiac and respiratory state and ventilation needs
- Treatment of diseases affecting nerve and muscle
- Rehabilitation management techniques for the treatment of diseases of nerve and muscle, including appropriate adaptive equipment and Orthoses
- Management of neuropathic pain

Attitudes

- Long term impact on the family
- Awareness of input available from national societies

17. Advanced competencies in spasticity

Factual knowledge

- Pathophysiology of spasticity and conditions causing spasticity
- Spasticity grading
- Symptoms of spasticity
- Precipitating factors
- Complications of spasticity
- Spasticity in children
- Impact of spasticity on long bones and the spine
- Therapy interventions for spasticity
- Orthotic interventions
- Drug treatment of spasticity
- Spasticity surgery

Clinical skills

- Assessment of spasticity
- Assessment of gait and postural abnormalities
- Botulinum toxin injections - muscle anatomy, localisation, EMG guided techniques
- Intrathecal Baclofen (ITB) pump assessments
- Management of ITB complications
- Refilling of ITB, refilling regimes
- Nerve blocks in spasticity
- Use of serial cast for spasticity/contracture

Attitudes

- Recognition of range of spasticity related problems in daily life
- Recognition of 24 hr postural management
- Recognition of the need for multidisciplinary input for optimal management
- Recognition of spasticity on self-esteem/ image and family relationships

18. Advanced competencies in Amputee rehabilitation and prosthetics

Factual knowledge

- the epidemiology, aetiology and classification of limb amputations
- differentiate common techniques of amputation surgery and levels of limb amputation including advantages/disadvantages and indications/contraindication
- describe principles of amputation management including:
  - Pre-operative phase
  - Post-operative phase
  - Pre-prosthetic phase
  - Preparatory prosthetic training phase
  - Definitive prosthetic training phase
  - Reintegration phase
  - Maintenance as needed
- describe postoperative patient management including:
- care of the surgical wound
- management of wound infection
- management of stump oedema
- phantom limb syndrome
- psychological support following limb loss
- early resumption of assisted ambulation and self care activity

- assessment of potential for prosthetic training
- prevention of limb contractures
- upper body strengthening and walking with aid in lower limb amputee
- types of prosthesis and components available and prescription of appropriate prosthetic
- correct application of prosthesis and liners
- training in transfers, standing and ambulation for safe functional mobility
- training in domestic, vocational and recreational skills
- achieving community reintegration
- discharge planning and post discharge support options
- safety and accessibility of home environment including provision of aids/modifications
- summarise principles involved in running an amputee clinic.

Skills

- Adequate Assessment of the Patient's Condition and complications – History, examination and functional assessment
- describe epidemiology, aetiology and classification of limb amputations
- management of stump and phantom limb syndrome
- management of psychological effects of loss of limbs
- Prescribing - The trainee is able to prescribe appropriately and safely a range of interventions for individuals with limb loss
- write a rehabilitation management plan specifying further medical and rehabilitation treatments in appropriate treatment venues
- review and coordinate rehabilitation management
- communicate effectively with the patient, family, and all members of the rehabilitation team

Attitudes

- understanding the psychological, social and economic effects of limb loss to the patient and the family
- Awareness of many support services which could help such patients
- Understanding and appreciation of frustration of patients due to poor communication
- Understanding of availability of technology to make a significant improvement to the quality of life.
- Ability to work with the rehabilitation team and other organisations- social services, employers, govt. sector to minimise barriers for the disabled

19. Advanced competencies in orthotics, specialised seating and assistive devices

Factual knowledge

- Orthotics (including definition, mechanics, materials and terminology)
- Gait analysis and gait with orthotics
- Lower extremity orthotics
- Upper extremity orthotics
- Cervical and spinal orthotics
- Specialized seating, pressure cushions, head/ trunk/back/leg adaptations, moulded seating
- Augmented communication / Adaptive equipment / Environmental Controls
- Disability equipment
- Environmental adaptations

Clinical skills

- Orthotic assessments and prescription
- Simple and complex gait analysis
- Interpretation of gait analysis reports
- Environmental controls assessments
- Recognise seating anomalies of complex neurological patients and possible secondary complications of poor seating postures
- Prescription of Assistive Devices

Attitudes

- Awareness of the impact, social limitations of orthotic devises
- Understanding of environmental limitations of the disabled causing sense of isolation and advocate changes.
- Awareness of seating and mobility limitations of the disabled
- Recognise the need for good seating systems for patients who are w/c bound
- Awareness of many support services which could help such patients
- Understanding and appreciation of frustration of patients due to poor communication
- Understanding of availability of technology to make a significant improvement to the quality of life.
- Ability to work with other organisations- social services, employers, govt. sector to minimise barriers for the disabled

20. Advanced competencies in Paediatric Rehabilitation Medicine- musculoskeletal and neurological conditions/disease/injury

Factual knowledge

- describe general features, natural history and disabling effects of the following conditions in children and adolescents:
- orthopaedic:
  - congenital hip dislocation
  - Perthe's disease
  - slipped femoral epiphysis
  - osteochondritides
  - spinal scoliosis
  - congenital and acquired limb deficiency
  - club foot/pes cavus/pes planus
  - skeletal dysplasias resulting in bony deformity and length discrepancy
- neurological:
  - cerebral palsy
  - Down syndrome
  - TBI and non-TBI
  - neural tube defects and spinal cord injury
  - poliomyelitis
  - neuromuscular diseases, including muscular dystrophies, progressive spinal muscular trophy, hereditary neuropathies, congenital and metabolic myopathies
  - movement disorders
  - sensory impairments, including visual and hearing loss
  - Long term sequelae of acquired brain infections (meningitis and encephalitis) and encephalopathies
  - neurological sequelae of skeletal dysplasia
  - Hydrocephalus
  - Birth injuries (including facial nerve palsy, brachial plexus palsy)
- Rheumatological
  - acute and chronic joint diseases
  - Torticollis
- Child Development and factors influencing the neurological developmental
- Factors affecting achievement of ambulation
- Factors operative in producing spinal deformities
- Plans for management of bowel and bladder dysfunction
- Medical and surgical interventions in managing disability
- Therapeutic exercise
- Dysphagia and drooling

Clinical skills

- Assessment of disability in children
- Assessment if growth impacting on disability
- Assessment of orthopaedic, neurological and rheumatological disease in children
- Classification of Cerebral Palsy, Gross Motor Function Classification System (GMFCS).
- Comprehensive rehabilitation program design
- Analysis of gait abnormalities
- Analysis of complex gait in a gait lab setting
- Prescription of physical therapy, orthotics, occupational therapy, complex seating, communication technologies, other assistive technologies, education, recreation and play therapy

Attitudes

- Assessment of impact of child disability on family and community
- Ability to liaise with medical and non-medical professionals including schools
- Ability to recognise changing needs of the child at different stages of life
- Ability to recognise vulnerable children and awareness of legislation
- Awareness of social services responsibilities
- Ability to recognise the impact on children with neuro-disabilities from their peers
- Ability to recognise educational needs and special measures needed for education.
- Awareness of additional impact of children with learning disabilities

ANNEXURE 2: SPECIFIC LEARNING OUT COMES – CLINICAL ROTATION

Learning outcomes of short appointments in Medical Rehabilitation postgraduate training

Rotation	Months	Learning outcomes
Stage 1		
Rehabilitation Unit	2	• Concepts of impairment, disability, activity limitation and participation restriction • The International Classification of Functioning, Disability and Health • The influence of medical, physical, psychological, social, educational, ethnic, cultural, vocational, gender and sexuality issues on the determination of disability, and their possible effects on the outcome of rehabilitation in the short and long term. • Pathophysiology and patterns of progression in acute, chronic and progressive disabilities. • Complexity of neurological disability. • Potential role and benefit of specific medical and rehabilitation therapies in the assessment and management of disability and activity limitation or participation restriction • Role of physical therapeutic modalities in the management of impairment and disability • Use of prosthetics, orthotics and adaptive equipment in the management of impairment and disability • Impact of disablement on the patient's family and the potential disturbance to family function: • Roles of government agencies, private organisations and volunteer groups in the community care and advocacy of persons with disability and activity limitation or participation restriction.

		• Principles of organisation and management of multidisciplinary rehabilitation, including use of goal setting, care plans and critical pathways
Neurology Unit	2	*Factual knowledge* • Applied anatomy and physiology of the central and the peripheral nervous system including the autonomic nervous system • Clinical presentation of disorders affecting central and peripheral nervous system • Localization of diseases within the nervous system o focal disease affecting cerebral hemispheres, brain stem, spinal cord, cauda 48quine, nerve roots, nerve plexus, peripheral nerves, muscles, NMJ o multi-focal disorders o extrapyramidal disorders • Metabolic and general medical disorders affecting the central and peripheral nervous system • Neurological disorders that are likely to lead to disability • Principles of management of neurological disorders • Mechanisms whereby psychological, social, behavioural factors and social circumstances can produce and modify the presentation of patients with physical symptoms *Clinical skills* • Conduct a clinical interview • Perform a neurological examination appropriate to the clinical situation • Obtain data for diagnosis and problem formulation • Formulate an appropriate management plan for neurological disease • Provide a firm basis for education and management

Paediatric Neurology and Rehabilitation	2	• Child Development and factors influencing the neurological development • Factors affecting achievement of ambulation • Factors operative in producing spinal deformities • General features, natural history, disabling effects and rehabilitation of the following: o Cerebral palsy and cognitive decline o Down syndrome o TBI and non-TBI o Neural tube defects and spinal cord injury o Acute flaccid paralysis o Neuromuscular diseases, including muscular dystrophies, progressive spinal muscular trophy, hereditary neuropathies, congenital and metabolic myopathies o Movement disorders o Sensory impairments, including visual and hearing loss o Long term sequelae of acquired brain infections (meningitis and encephalitis) and encephalopathies o Neurological sequelae of skeletal dysplasia o Hydrocephalus, macro and microcephaly o Birth injuries (including facial nerve palsy, brachial plexus palsy)
Stage 2		
Rehabilitation Unit	***6***	• ***Refer to Annexure 1 (Sections 4,5,6,9,10,11,12,13,14,15,16,18,19)***
Neurology Unit	***3***	• ***Refer to Annexure 1 (Sections 3,4,11,15,16,17)***
Paediatric rehabilitation	***5.5***	• ***Refer to Annexure 1 (Sections 20)***
Stage 3		
Neurotrauma and Neurosurgery	0.5	• Pathophysiology of traumatic brain injury, classification, assessment, monitoring, management of secondary deterioration, sequel and prognostication of brain injury

		• Polytrauma and impact of them on brain injury and rehabilitation. • Knowledge of surgical interventions both neuro and orthopaedic in the management of acute brain, spinal cord and peripheral nerve damage • Role of neurosurgery in strokes, cerebral infections, neoplasms, hydrocephalus
Orthopaedic	0.5	• Management of common orthopaedic trauma, non-traumatic conditions, joint replacements, orthopaedic malignancies • Role of orthopaedic interventions in chronic disabilities, gait analysis, spinal deformities, soft tissue surgeries for contractures and amputations • Non-surgical options available for management - splinting, serial casting, corsets
Rheumatology	1	• Epidemiology of disabling disorders including Rheumatoid disease, the spondyloarthritides, Osteoarthrosis, soft tissue rheumatism, spinal disorders, osteoporosis, and congenital & acquired disorders of muscle • Prevalence & incidence of musculoskeletal disorders in other disabling conditions. • Pharmacological options in Inflammatory and non-inflammatory, Connective tissue disorders, diseases of bone (particularly osteoporosis), inflammatory muscle conditions (congenital and acquired) • Non-pharmacological treatment options for disabling disorders include role of surgery, education, self-management, occupational therapy, physiotherapy, exercise and rest, safe injection techniques, biomechanical modalities such as orthotics, assistive devices and environmental adaptation • Experience in joint injections.

Plastic surgery and burns	0.5	• Pathophysiology of burn injuries and its healing process • Rehabilitation methods of problems after burn injuries • Prevention and management of complications after burn injury • Plan out a rehabilitation programme for a patient after a burn injury
Cardiac rehabilitation	0.5	• Methods of assessment of a patient presenting with cardiac disease and evaluate functional capacity and the potential for rehabilitation • Methods of formulating a cardiac rehabilitation program
Respiratory rehabilitation	0.5	• Methods of assessment of a patient presenting with respiratory disease and evaluate functional capacity and the potential for rehabilitation • Methods of formulating a respiratory rehabilitation program
Stage 4		
Overseas training	***12 – 24***	***Refer to Annexure 1 (Sections 1,3,4,5,9,12,13,14,15,17,18,19,20)***

ANNEXURE 3 : FORMAT OF DETAILED PROJECT PROPOSAL

Section 1

1. Name of trainee
2. Name(s) of supervisor(s)
3. Training centre

Section 2

1. Project title
2. Background and justification
3. Objectives of study
4. Research plan

a. Design
b. Setting
c. Method
d. Sample size and sampling techniques
e. Outcome measures
f. Statistical analyses and plan of presentation of results
g. Ethical considerations
h. Work plan and time lines

5. References
6. Funding for study
7. Signature of trainee

Section 3

Recommendation of supervisor(s)

Signature of Supervisor 1	Signature of Supervisor 2
Date	Date

Section 4

Date of submission to PGIM

Date of approval by BOS	Signature of Secretary BOS

ANNEXURE 4: REPORT OF THE RESEARCH PROJECT FOR REVIEWER

1. Name of Trainee:

2. Training Centre:
3. Supervisor:
4. Reviewer:

Name:

Designation: Address Official:

Tel//Fax: Email:

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5. Title of Project:

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6. Please comment on each of the following headings.

6.1 Introduction: Rationale (Justification) – problem identified and quantified. Hypothesis and expected outcome, impact and relevance of the study.

Comment: …….

6.2 Literature Review: Adequacy (evidence of a systematic search for related. similar, relevant studies)

Comment: ……..

6.3 Objectives: Clearly defined, relevant and stated in measurable terms.

Comment: ……..

6.4 Method: Appropriate study design to address the objectives with clear detailed description of subjects, sampling technique and sample size, interventions, data collection and management. The study should be, internally valid and reproducible.

Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a minimum. If modifications have been made to the published techniques, these should be described in full. Appropriate statistical tests planned should be mentioned and ethical issues addressed

Comment: ……..

6.5 Results: Order of presentation and appropriate presentation of tables, figures, graphs. Appropriate statistical analyses and interpretations

Comment:…….

6.6 Discussion: The findings of the study should be discussed taking into consideration findings of relevant studies, within and outside the country. The discussion should not be a repetition of the results only. Limitations should be included.

Comment:……

6.7 Conclusion and recommendation: Based of the results of the study and to address the objectives

Comment: ……

6.8 Limitations: Any inherent and / or inadvertent biases and how they were dealt with.

Comment:……

6.9 References: According to the Vancouver system and relevant to the study. Properly documented in the Bibliography and appropriately cited in the text

Comment: ……

6.10 Institution(s) where work would be carried out:

6.11 Ethical considerations/institution from where ethical approval will be /has been obtained:

Comment: ……

6.12 Overall presentation: Overall presentation of the proposal (grammar, spelling, typographical mistakes etc.).

Comment: ……

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7. Recommendation of reviewer:

Comment: ……

- Is the project report acceptable? Yes / No

- If No, What corrections are required? (Attach a separate sheet of paper if necessary)

Signature: **Date:**

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8. Recommendation of the Specialty Board in Rehabilitation Medicine:

Signature of Chairperson/Secretary: **Date:**

ANNEXURE 5: INSTRUCTIONS TO SUPERVISORS

- The objective of the research project is to prove the trainee's capability to plan, carry out and present his / her own research. The purpose of this training is to ensure maturity, discipline and scholarship in research.
- The supervisor should guide the student in planning and designing, carrying out the research and in presentation of the work.
- The research project must be original and must comprise the trainee's own work.
- It must contribute to existing knowledge relevant to Sri Lanka and afford evidence of originality as shown by independent, critical assessment and / or discovery of new facts in the area under study.
- It should be satisfactory with regard to literary presentation.
- The research project should be certified by the supervisor as suitable for submission.
- General Comments on the contents: The objectives should be clearly stated and should be feasible to achieve within the time frame. Other published work relevant to the problem (both international and local) should be comprehensively and critically evaluated. An appropriate study design and method should be used to achieve the objectives stated. The results should be appropriately analysed, interpreted and presented effectively. The discussion should include comments on the significance of results, how they agree or differ from published work. If they differ, the probable reasons for these differences need to be discussed. Theoretical / practical applications of the results, if any should be given. The conclusions should be valid and be based on the results obtained on the study.
- Ethics: Approval should be obtained by a recognized Ethics Review Committee prior to commencement of the research project.
- If at any time the supervisor is not satisfied with the work progress of the trainee, the trainee should be made aware of the deficiencies and corrective measures suggested. This should be conveyed in writing to the trainee with a copy to the Specialty Board in Rehabilitation Medicine. In such instances, a follow-up report should be forwarded within three months or earlier.

ANNEXURE 6: RESEARCH PROGRESS REPORT

To be forwarded by the supervisor to the Specialty Board in Rehabilitation Medicine at least once in SIX months

1. **Name of trainee:**
2. **Training Centre:**
3. **Supervisor:**
4. **Title of project:**
5. **Description of work carried out to date:**

To be filled in by trainee: briefly describe progress in lab / field work and report writing

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Supervisor's comments

6. **Is the work on schedule**? Yes / No
7. **Progress in writing**: satisfactory / unsatisfactory
8. **Constraints** (if any)
9. **Recommendation of supervisor**:

Signature: Date:

---

10. **Recommendation of the Specialty Board in Rehabilitation Medicine:**

Signature of Secretary: Date:

ANNEXURE 7: RESEARCH REPORT FORMAT

General instructions

The past tense should be used. The metric system and the International System (SI) of units should be used whenever possible.

Length

The text should *not* exceed 4000 words, which equals to approximately 10 pages. With figures, references, etc., the total length is likely to be in the region of 15 - 20 pages.

Submission

The research report should be included in the Portfolio only if the trainee does not succeed in publishing the study in a peer-reviewed journal. If published, only the published article should be included in the Portfolio.

Layout

As presented in research papers in the journal *Lancet Neurology*.

ANNEXURE 8: RESEARCH REPORT MARKING SCHEME

1. Title (05)
2. Author's name and address
3. Abstract (05)
4. Table of contents
5. List of tables
6. List of figures
7. Introduction (10)
8. Objectives (10)
9. Review of literature (10)
10. Materials and methods (15)
11. Results (15)
12. Discussion (including limitations) (20)
13. Conclusion and recommendations
14. Acknowledgements
15. References (05)
14. The overall presentation (05)

To pass the trainee should score 50 % or more. This mark will be part of the overall evaluation of the Portfolio.

ANNEXURE 9: PORTFOLIO

Objectives

To be appointed as a Specialist in Rehabilitation Medicine to practice independently in Sri Lanka, on completion of the in-service training after the MD (Medicine) Examination and four years' training in Rehabilitation Medicine, the Trainee should:

a) have administrative and organizational skills
b) be able to clearly document and prioritize problems
c) have skills appropriate to a specialist (diagnostic, operative, counselling, risk management, management of medico-legal issues)
d) have appropriate attitudes
e) be able to carry out and also supervise research and clinical audits
f) be committed to Continuous Professional Development
g) be able to disseminate knowledge effectively
h) be able to communicate effectively
i) have adequate knowledge and skills in Information Technology

Learning outcomes

1. Subject expertise
2. Teaching
3. Research and audit
4. Ethics and medico-legal issues
5. Information technology
6. Life-long learning
7. Reflective practice

The contents of the portfolio should encompass all of the above learning outcomes and contain evidence of achievement of these outcomes by the trainee. Although some of these may have been evaluated before the MD examination, the portfolio assessed at the PBCA should mainly contain evidence of achievements during post-MD training, either locally or overseas. All sections need not be of equal weight – for example, the section on Subject Expertise may be much more detailed than the others.

The fundamental basis of Portfolio maintenance is Reflective Practice, which is an important tool in postgraduate training. Reflective practice consists of:

a. focused self-assessment
b. reflecting on experience

c. reflecting on strengths, weaknesses and areas for development
d. design of own strategies that leads to improvement in practice

Using such a process, there is improved training by self-identification of strengths and weaknesses, which is expected to promote deep learning, document what the trainee already knows, identify areas for improvement and help in planning further learning. This approach promotes self-directed learning and critical thinking skills.

The objectives of maintaining a Portfolio is

a. to help the trainee to record his/her training in brief so that the experience acquired can be assessed and deficiencies identified and remedied
b. to help supervisors and assessors to evaluate the overall training and provide guidance in areas where it is needed.

The Portfolio should consist of

- Documentation of all aspects of training and learning experienced by the trainee.
- It must include a case record book of a minimum of three case records (One each from neurological, musculoskeletal and paediatric disorder/injury). Each case record should not exceed 3000 words. A published case report in a refereed journal can be substituted for a case, if the supervisor certifies that the trainee's contribution for the publication justifies exemption.
- Details of Continuing Professional Development (CPD) activities: minimum of 30 CPD points.

CPD points will be allocated as follows:

- Participation in the Academic Sessions of the College of Specialist in Rheumatology and Rehabilitation - Sri Lanka, the Association of Sri Lankan Neurologists (ASN) or any Neurology/Rehabilitation Medicine congress: 3 points each
- Participation in the Academic Sessions of the Sri Lanka Medical Association (SLMA) or the Ceylon College of Physicians (CCP): 2 point each
- Oral or poster presentation related to Rehabilitation Medicine at any Medical/Neurology/Rehabilitation/Rheumatology/Surgical congress: 6 points each
- Participation in CSRRSL/ASN lecture, clinical forum or workshop relevant to Rehabilitation Medicine: 1 point each
- Presentation at Young Physician forum, Young Neurologist forum or CSRRSL/ASN clinical forum: 2 points each

Points will be allocated in only one category for one activity, i.e., a trainee presenting at a session can only claim points for presentation and not participation in that session. Documentary evidence such as a certificate or a letter is required in order to claim points.

- Records of scientific presentations made.
- Mini-clinical examination (Mini-CEX) (**Annexure 10**):

Minimum of 5 which must include at least 1 each during rotations in Rehabilitation Hospital, Neurology, Paediatric Neurology and Paediatric rehabilitation. (A suggested list of topics is given in **annexure 11**)

- Case-based discussions (CBD) of patients with (**Annexure 12**):
  Minimum of 8, which must include at least 2 each during rotations in Rehabilitation Hospital, Neurology, Paediatric Neurology and Paediatric rehabilitation. (A suggested list of topics is given in **annexure 11**)
- Direct Observation of Practical Skills (DOPs) (**Annexure 13**):

Minimum of 5 which must include at least 1 each during rotations in Rehabilitation Hospital, Neurology, Paediatric Neurology and Paediatric rehabilitation. (A suggested list of topics is given in **annexure 11**)

- Regular reflective entrees on all aspects of patient care and professional training.
- A record of individual activity-based entries on the trainee's own experience.
- Published article or report of the research project undertaken during the training period (see 5.3.4).
- Report of clinical audits (see 5.3.5).

The contents of the portfolio should be divided into **7 sections**. The following list sets out the type of evidence that may be relevant to each section.

1. Subject expertise:

- case record book
- progress reports from supervisors (essential, should be according to prescribed format)
- Supervisor feedback on communication skills
- log of procedures carried out
- results of any work-place based assessments conducted
- In the case of sub-specialities, this section must include evidence that the trainee has acquired the essential knowledge, skills and competencies related to the sub-speciality, identified by the Speciality Board (see above), and monitored with regular assessments throughout the period of post-MD training, e.g. mini-CEX, Case-Based Discussions, Direct Observation of Practical Skills

2. Teaching

- undergraduates
- postgraduates
- ancillary health staff

- Community

3. Research and Audit relevant to Rehabilitation Medicine

- Dissertations / theses
- Research papers published or accepted for publication
- abstracts of presentations
- Clinical audit

4. Ethics and Medico-legal Issues

- Completed Professionalism Observation Forms (from integrated learning component of Professionalism Strand)
- Completed PTR forms during post-MD training

5. Information Technology

- Participation in training programmes / workshops
- Evidence of searching for information and application of findings in practice

6. Life-long learning

- Participation in conferences and meetings
- CPD points

7. Reflective practice

- Narration of at least one learning event experienced by the trainee, in relation to each of the above outcomes, with reflection on what and how the trainee learned from this experience

Entries in the Portfolio should be made by the trainee at the time of acquiring the skill and *authenticated (signed)* by the trainer or supervisor.

The trainee is expected to keep the portfolio updated regularly. The trainers and supervisors will use the portfolio to assess the progress of the trainee and to provide a feedback at regular intervals (e.g. every 6 months) during the training period. The trainers and supervisors are expected to assess the level of competencies in different areas of training and provide advice and assistance to the trainees to achieve the expected levels of skills empowerment.

It is the responsibility of the trainees, the trainers and the supervisors to ensure that the entries in the Portfolio are *authentic* and made *regularly*. It is essential to provide the trainee with accurate feedback on his or her views about his or her performance during the training period.

The Specialty Board in Rehabilitation Medicine expects the Trainee and the Trainers to make the best use of the Portfolio in order to achieve the objectives of the training programme. The portfolio should be kept as a ring binder document which will allow easy insertions of documents by the Trainee.

When the trainee is eligible for Pre-Board Certification Assessment (PBCA), 3 copies of the completed portfolio should be submitted to the PGIM Examinations Branch. It will be assessed by a panel of two examiners appointed by the Specialty Board in Rehabilitation Medicine.

ANNEXURE 10: MINI-CLINICAL EVALUATION EXERCISE

Study Programme: **Date of Assessment:**

Trainee's Name: **Training Year:**

PGIM Reg. No:

Assessor's Name: **Designation:**

Brief summary of Case:

Focus: O Data gathering O Diagnosis O Therapy O Counselling

1. Medical Interviewing Skills(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

2. Physical Examination Skills(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

3. Humanistic Qualities/Professionalism(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

4. Clinical Judgement(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

5. Counselling Skills(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

6. Organisation/Efficiency(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

7. Overall Clinical Competence (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

Rating Scale: Nine point rating scale is used. Rating of 4 is defined as 'marginal" and conveys the expectation that with remediation that the trainee will meet the expected standards.

DESCRIPTORS OF COMPETENCIES DEMONSTRATED DURING MINI-CEX

Medical Interviewing Skills: facilitates patient's telling of story, effectively uses questions directions to obtain accurate information needed, responds appropriately to affect, non-verbal cues.

Physical Examination Skills: follows efficient, logical sequence, balances screening/diagnostic steps for problem, informs patient, sensitive to patient's comfort, modesty

Humanistic/Qualitative Professionalism: shows respect, compassion, empathy, establishes trust, attends to patient's needs of comfort, modesty, confidentiality, information

Clinical Judgement: selectively orders/performs diagnostic studies, considers risks/benefits

Counselling Skills: explains rationale for test/treatment, obtains patient's consent, educates/counsels regarding management

Organization/Efficiency: prioritize, is timely, succinct

Overall Clinical Competence: Demonstrates judgement, synthesis, caring, effectiveness, efficiency

Which aspects of the encounter were done well?

……

……

……

Any suggested areas for improvement?

……

……

……

Agreed action:

……

……

……

Assessor Satisfaction with Mini-CEX

LOW 1 2 3 4 5 6 7 8 9 HIGH

Trainee Satisfaction with Mini-CEX

LOW 1 2 3 4 5 6 7 8 9 HIGH

Comments:……
……

Assessors Signature:…… Trainee's Signature:……

ANNEXURE 11 : TOPICS FOR MINI - CEX, CBD AND DOPS

MINI-CLINICAL EVALUATION EXERCISE		
Upper limb nerve injury	Shoulder joint examination	
Lower limb nerve injury	Hip joint examination	
Brachial plexus injury at birth	Knee joint examinations	
Hand examination		
CASE-BASED DISCUSSION		
Quadriplegia	Traumatic brain injury	After knee replacement
Paraplegia	Guillain-Barre syndrome	After hip replacement
Right hemiplegia	Below knee amputee	Cerebral palsy below 3
Left hemiplegia	Deforming arthritis	years
Brainstem stroke	Lower limb fracture	Cerebral palsy above 3
Acute stroke	Upper limb fracture	years
Cognitive impairment	Gait difficulty	Above knee amputee
Neuropathic pain	Recurrent falls	Upper limb amputee
		Sphincter incontinence
		Neuromuscular disorders
DIRECT OBSERVATION OF PROCEDURAL SKILL (DOPS)		
Neurological classification of spinal injury	Cerebral palsy functional assessments	
Functional scales after strokes	Scoliosis x-ray assessment	
Swallowing test	Steroid injections	
Botulinum toxin injections	- Rotator cuff, Shoulder and Knee joints	
Filling of intrathecal baclofen pumps		

ANNEXURE 12: CASE-BASED DISCUSSION

Study Programme: **Date of Assessment:**

Trainee's Name: **Training Year:** **PGIM**

Reg. No:

Assessor's Name: **Designation:**

Brief summary of Case:

Setting: O In-Patient O Out-Patient O Emergency O Other (please specify)

8. Medical Record Keeping(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

9. History taking(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

10. Clinical findings and Interpretation(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

11. Treatment/management Plan(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

12. Follow-up and Future Planning(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

13. Professionalism(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

14. Overall Clinical Judgement(o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

Rating Scale: Nine point rating scale is used. Rating of 4 is defined as 'marginal" and conveys the expectation that with remediation that the trainee will meet the expected standards.

DESCRIPTORS OF COMPETENCIES DEMONSTRATED DURING CBD

Medical Record Keeping: Understood the need for an accurate and appropriate clinical record

History taking: : facilitates patient's telling of story, effectively uses questions directions to obtain accurate information needed, responds appropriately to affect, non-verbal cues

Clinical Findings and Interpretation: Was able to describe the key issues and their clinical relevance

Treatment/Management Plan: Reviewed and understood the significance of appropriate investigations, requested additional information and was able to formulate a treatment/management plan

Follow-up and Future Planning: Was able to formulate a plan for future care based on knowledge of potential problems and their severity.

Professionalism: Where relevant, knew and followed appropriate standards, guidelines and protocols**.** Selectively orders/performs diagnostic studies, considers risks/benefits

Overall Clinical Judgement and Clinical care: Demonstrates an appropriate, systematic and co-ordinated approach to clinical care.

Strengths

……
……
……
……

Suggestions for development

……
……
……
……

Agreed action:

……
……
……
……

Time taken for discussion mins **Time taken for discussion mins**

Assessor Satisfaction with CBD

LOW 1 2 3 4 5 6 7 8 9 HIGH

Trainee Satisfaction with CBD

LOW 1 2 3 4 5 6 7 8 9 HIGH

Comments:……
……
……
Assessors Signature:…… Trainee's Signature:……

- The Case-based Discussion encounter takes approximately 30 minutes, including a 10 minute feedback session.
- The trainee discusses the case(s) with their assessor, including their approach, the results, and reflection on what went well and what they would change in similar situations in the future.
- The assessor may prompt for further information when required.
- The assessor makes notes and rates the trainee's performance on the PGIM Case-based Discussion rating form throughout the session. The assessor provides an overall 'competence' rating based on the outcome of the encounter.
- If a trainee receives a rating which is unsatisfactory, the assessor must complete the 'Suggestions for development' section. The form cannot be submitted if this section is left blank.
- Discussion of the case(s) is immediately followed by feedback from the assessor.
- Feedback should focus on the trainee's clinical decision making skills and include comments on what the trainee did well and areas for improvement.
- If any significant areas for development are identified during the session, the assessor and the trainee should devise a remediation plan.

ANNEXURE 13: DIRECT OBSERVATION OF PROCEDURAL SKILL (DOPS)

Study Programme:

Date of Assessment:

Trainee's Name: **Training Year:** **PGIM**

Reg. No:

Assessor's Name: **Designation:**

Procedure:
Setting: O In-Patient O Out-Patient O Emergency O Other (please specify)

15. Demonstrates understanding of indications, relevant anatomy, technique of procedure (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

16. Obtains informed consent (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

17. Demonstrates knowledge of equipment and uses equipment appropriately (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

18. Appropriate analgesia or safe sedation (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

19. Technical ability (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

20. Aseptic technique if appropriate (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9

UNSATISFACTORY SATISFACTORY SUPERIOR

---

21. Seeks help where appropriate (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9
UNSATISFACTORY SATISFACTORY SUPERIOR

---

22. Post procedure management (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9
UNSATISFACTORY SATISFACTORY SUPERIOR

---

23. Communication skills (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9
UNSATISFACTORY SATISFACTORY SUPERIOR

---

24. Professionalism (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9
UNSATISFACTORY SATISFACTORY SUPERIOR

---

25. Overall ability to perform procedure (o Not Observed)

1 2 3 / 4 5 6 / 7 8 9
UNSATISFACTORY SATISFACTORY SUPERIOR

Rating Scale: Nine point rating scale is used. Rating of 4 is defined as 'marginal" and conveys the expectation that with remediation that the trainee will meet the expected standards.

DESCRIPTORS OF COMPETENCIES DEMONSTRATED DURING DOPS

1. **Demonstrates knowledge of indications, relevant anatomy and technique:** Understood the indications for the procedure and clinical alternatives
2. **Explains procedure/risks to the patient and obtains informed consent:** Clearly explained plans to the patient and explained potential risks in a way they understood.
3. **Demonstrates knowledge of equipment and uses equipment appropriately:** demonstrate knowledge of the equipment used for the procedure and he/she optimises equipment parameters for individual Examinations.
4. **Uses appropriate analgesia/safe sedation:** Does the trainee use adequate amounts of appropriate drugs to minimise patient discomfort? Is this titrated where appropriate
5. **Technical ability:** Most pertinent to practical applications such as ultrasound, interventions and screening: Is there satisfactory hand-eye coordination? Skilful and handled patient and tissues gently.
6. **Aseptic techniques:** Aware of risks of cross-infection and effective aseptic technique during procedure was demonstrated

7. **Seeks help where appropriate:** Does the trainee recognise his/her limitations and request assistance when appropriate?
8. **Post procedure management:** Issued clear post-procedure instructions to patient and/or staff.
9. **Communication skills:** Is the trainee polite, and exhibits a sense of self within a team structure? Is he / she able to convey understanding to others?
10. **Record keeping:** Maintained accurate and legible records including descriptions of problems or difficulties.
11. **Professionalism:** Sought at all times to work to the highest professional standards
12. **Overall Clinical Competence**: Demonstrates judgement, synthesis, caring, effectiveness, efficiency

Examples of good practice were:

Areas of practice requiring improvement were:

Further learning and experience should focus on:

Assessors Signature:…… Trainee's Signature: …….

ANNEXURE 14: PROGRESS REPORT ASSESSMENT FORM

Name of the trainee: Name of the trainer:

Institution: Period covered:

(Please tick [√] in appropriate cages)

Training modality	***Excellent***	***Good***	***Average***	***Poor***	***Comments***
Clinical skills:- History taking					
Examination					
Clinical decision making					
Use of diagnostic tests					
Procedural / Technical skills					
Doctor-patient relationship					
Communication skills					
Staff relationships					
Professional responsibility					
Participation in research activities					
Participation in Seminars, Case presentations /audits etc					
Punctuality					
Attitudes					
Overall assessment at the end					

General / Specific comments

.....

.....

Signature of Trainer: Date:

Designation:

ANNEXURE 15: PEER TEAM RATING (PTR)

PTR FORM B

Confidential

Dear Colleague,

You have been invited to participate in Peer Team Rating of this doctor. PTR is a tool for multi source feedback 360^0 assessment. We value your independent and honest rating of our trainees.

Please indicate your profession by filling in one of the following circles

O Consultant	O Registrar	O SHO or HO
O Allied Health Professional	O Senior Registrar	O Nurse
O Clerical or Secretarial Staff	O Other specify…….	

Your scoring should reflect the performance of this trainee against that which you would reasonably expect at his/her stage of training and level of experience. Please feel free to add any other relevant comments about this doctor's strengths and weaknesses.

Please place form in the attached self addressed envelope and return to the Trainer named on the envelope. DO NOT return to the trainee concerned.

Name of trainee: **Specialty:** **Date:**	**Strongly Disagree** **1**	**2**	**3**	**4**	**Strongly Agree** **5**
1. Attitude to staff: Respects and values contributions of other members of the team	**1**	**2**	**3**	**4**	**5**
2. Attitude to patients: Respects the rights, choices, beliefs and confidentiality of patients	**1**	**2**	**3**	**4**	**5**
3. Reliable & punctual	**1**	**2**	**3**	**4**	**5**
4. Communication skills: communicates effectively with patients and staff	**1**	**2**	**3**	**4**	**5**
5. Team player skills: Approachable, Supportive and accepts appropriate responsibility	**1**	**2**	**3**	**4**	**5**
6.Leadership skills: Takes responsibility for own actions and actions of the team	**1**	**2**	**3**	**4**	**5**
7. Honesty and Integrity: do you have any concerns?	Yes				No

8. What is your overall rating of trainee's professionalism?

Very poor								**Extremely good**	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Comments

Name: Signature:

Date:

THE PTR IS NOT AN ASSESSMENT OF KNOWLEDGE OR PRACTICAL SKILLS

ANNEXURE 16: REPORT OF IN-SERVICE TRAINING ASSESSMENT

Report of In-service Training Assessment

Place of Assessment: ……

Date of Assessment: ……

Name and signatures of Examiners:

1		
2		
3		
4		
5		
6		

The grading should be as follows in each area of assessment

Below expectations	Meets the expectations	Above expectations
C	B	A

Clinical skills	**Exam 1 Grading**	**Exam 2 Grading**	**Exam 3 Grading**	**Exam 4 Grading**	**Exam 5 Grading**	**Exam 6 Grading**
History taking						
Examination						
Diagnostic and problem solving skill						
Management						
Procedural skills						
Knowledge of General and musculoskeletal Rehabilitation						
Knowledge of Neuro-rehabilitation						
Knowledge of Paediatric neurology & rehabilitation						

Attitudes & Professional behaviours

Professional role		
Patient focus		
Interdisciplinary Management		
Patient advocacy		

Administrative and leadership skills		
Continuing Medical Education		
Literature search		

Overall Performance:

Comments / Recommendations:

……
……
……
……
……
……

ANNEXURE 17 : MARKING SCHEME FOR THE PBCA

The candidate will be assessed in following areas

1. Portfolio
2. Recent advances in Rehabilitation Medicine
3. Evidence-based medicine in Rehabilitation Medicine
4. Clinical reasoning

Equal weightage will be given to the above four components. An overall mark of 50% or more
would be considered as satisfactory.