Rehabilitation Medicine Postgraduate Training in Malaysia

GUIDE FOR APPLICANTS

VERSION 1, 2020

Copyright

Published by:
Majlis Dekan Fakulti Perubatan Universiti Awam Malaysia
MERDU, Fakulti Perubatan, Universiti Malaya, 50603 Kuala Lumpur, Malaysia
npmcmy@gmail.com

First Publication, 2021

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

Rehabilitation Medicine Postgraduate Training in Malaysia : GUIDE FOR APPLICANTS.
VERSION 1, 2020.
Mode of access: Internet
eISBN 978-967-19546-9-0
1. Medical education--Curricula--Malaysia.
2. Rehabilitation counselors--Training of.
3. Medical rehabilitation.
4. Government publications--Malaysia.
5. Electronic books.
610.7155

Acknowledgements

The steering group of the National Postgraduate Medical Curriculum Project would like to express their thanks to the following:

1. Professor Dr. Simon Frostick and Mr. David Pitts for the overall design of the curriculum templates, development of the Essential Learning Activities, editing of curriculum modules, consultation and coaching for writing groups.
2. Ministry of Higher Education for their funding support.
3. The Development Division, Ministry of Health for their valuable support and practical insights.
4. Members of the Medical Deans Council for their unequivocal support for the project.
5. Members of Specialty/Conjoint Boards who have facilitated the work of individual specialties.

Table of Contents

Preface

What is this document?

This document is a guide for those applying to enter postgraduate training in Rehabilitation Medicine. It contains information on the entry requirements for the specialty training programme, the selection process and what the training entails. It is an extract from the Postgraduate Curriculum for Rehabilitation Medicine and provides key summaries about the training, structure, syllabus and assessments.

The National Postgraduate Medical Curriculum

The Rehabilitation Medicine curriculum is a product of a collaborative effort by members of the Conjoint Board committees for Rehabilitation Medicine of the Malaysian National Universities from the Ministry of Education (MOE), Ministry of Health (MOH), and Malaysian Association of Rehabilitation Physician (MARP)

This curriculum sets the common training programme for Rehabilitation Medicine across the whole of Malaysia and ensures that specific standards are met to produce specialists who are highly skilled, competent and ethical in clinical practice.

The writers

The members of the core team of authors as appointed by the Conjoint Board of Rehabilitation Medicine are acknowledged as follows:

Dr. Aishah Ahmad Fauzi
Senior Lecturer, Consultant
Department of Rehabilitation Medicine
Faculty of Medicine
University Malaya

Prof. Dr Lydia Abdul Latif
Professor, Consultant
Department of Rehabilitation Medicine
Faculty of Medicine
University Malaya

Associate Prof. Dr. Rashidah Ismail @ Ohnmar Htwe
Consultant Rehabilitation Physician
Rehabilitation Medicine Unit
Department of Orthopedic and Traumatology
UKM Medical Centre (UKMMC)

Dr. Wan Najwa bt Wan Mohd Zohdi
Head of Department, Consultant
Department of Rehabilitation Medicine
UiTM, Sg. Buloh Campus

Dr. Al Hafiz bin Ibrahim
Senior Lecturer, Consultant Rehabilitation Physician
Rehabilitation Medicine Unit
Department of Orthopedic
Universiti Sains Malaysia, Kubang Kerian

Dr. Chern Phei Ming
Consultant Rehabilitation Physician
Hospital Rehabilitasi Cheras

Dr. Khairiah Mohd Yatim
Consultant Rehabilitation Physician
Hospital Tuanku Jaafar, Seremban

Dr. Shivani A/P Rajasegaran
Rehabilitation Physician
Hospital Permaisuri Tuanku Bainun
Ipoh, Perak

Dr Fatimah Ahmedy
Senior Medical Lecturer &
Rehabilitation Medicine Specialist
Faculty of Medicine & Health Sciences
Universiti Malaysia Sabah

CURRICULUM CONTRIBUTORS

Associate Professor Dr. Julia Patrick Engkasan
Head of Conjoint Board
Masters of Rehabilitation Medicine

Dr. Yusniza Mohd Yusof
Head of Rehabilitation Medicine Service
Ministry of Health

REVIEWERS

Conjoint Board Members of Masters of Rehabilitation Medicine

Introduction

Purpose of this guide

The purpose of this guide is to inform prospective applicants seeking a career in Rehabilitation Medicine. It summarises the key aspects of the curriculum, (entry requirements, process, training structure, assessments, some documentation and exit criteria), and provides a guide as to how to prepare and proceed with the application.

What is Rehabilitation Medicine?

Rehabilitation Medicine is a clinical specialty encompassing the diagnosis, assessment and prognostication of recovery and function, as well as the management of patients with disabilities due to illness or injury. The main aim of rehabilitation management is to help disabled individuals achieve an optimal level of functional performance, therefore improving their quality of life. This management is best delivered in the form of an interdisciplinary approach consisting of collaborative team members, and includes rehabilitation physicians and various allied health professionals.

Size of the specialty

There are at present approximately 106 registered specialists, (NSR, 30 June 2020), practicing in Malaysia. As of May 2020, 75% i.e. 79 practitioners are serving in Ministry of Health (MOH) tertiary hospitals, 18 in University based settings, (with or without a university hospital), (UM, UKM, UiTM, USM, UMS, UIA and UPM), and 9 are in the private practice. At present, the only training centre for rehabilitation medicine is located in the University of Malaya, (UM), with 8 rehabilitation physicians as trainers. Each year between 8 and 10 trainees will be accepted for training. The majority of trainees are sponsored by the Public Service Department, (JPA), through the Ministry of Health. There is an urgent need to increase the number of Rehabilitation Medicine specialists and provide better care across Malaysia. This specialty has become one of the most highly competitive, and in Malaysia, the applications for entry into this training programme have increased dramatically having more than tripled in the past 5 years.

Unique features of the specialty

Rehabilitation medicine is a constantly varied and dynamic specialty dealing with the needs of complex and sometimes challenging patients. This can encompass a wide range of clinical skills and treatments from the assessment of cognitive changes following traumatic brain injury to the prescription of computerised prosthetic components in amputees. It often encompasses both physical and psychological impairment and is focussed on treating the complete individual and improving the quality of life for patients with chronic illnesses. Even small interventions can result in a major improvement and trainees will get exposure to a wide-range of patient care that allows them to build skills across many different disciplines. There are opportunities for research and development, as well as acute/chronic management and inpatient/community work. It is an innovative and constantly evolving speciality.

Why choose Rehabilitation Medicine as a career?

Rehabilitation Medicine is an exciting and challenging specialty, which allows physicians to lead the Rehab team in delivering holistic and goal-oriented rehabilitation management, and developing innovative and creative solutions for each patient. It is focused on the improvement of patients' functional outcomes and quality of life. Core clinical skills acquired by a Rehabilitation physician include; making diagnoses, establishing patients' level of disabilities, formulating functional prognosis and forming rehabilitation management plans with other team members. In addition to the core clinical skills various interventions have emerged and become established as part of rehabilitation management. These include both medical and psychological treatments and the use of constantly evolving and advancing technology.

Being a physician in the Rehabilitation Medicine specialty provides the opportunity to work with healthcare professionals from other medical and surgical disciplines, and excitingly, the prospect of working with prosthetist and orthotist as well as biomedical engineers. Rehabilitation Medicine is a very rewarding clinical practice, but also allows a balanced professional and personal life. This makes it a tremendously satisfying field to pursue as a life-long career.

Is Rehabilitation Medicine for you?

Rehabilitation Medicine spans and combines a wide remit of different areas of medicine, trainees must want to work across multidisciplinary areas, work well in a team and cover all aspects of patient care. The specialist will encounter interesting and varied challenges including medical, ethical, personal and interpersonal aspects, and sometimes legal considerations. Rehab Med specialists must be motivated, have good interpersonal skills, work collaboratively, have leadership skills and be focused on a holistic level of personal care. Trainees are required to demonstrate personal qualities that are essential for good practice and key to the role are Integrity, Respectfulness, Compassion, Empathy and Emotional Intelligence.

Do you have the qualities above and want a satisfying and gratifying career with a fantastic range of subspecialties and skills? If you want to make a significant change to an individual's quality of life then Rehabilitation Medicine is definitely for you.

1. The Rehabilitation Medicine Programme

Training pathways

There is only one pathway for attaining the qualification as a specialist in Rehabilitation Medicine, the Master's degree programme through the Ministry of Education pathway MOE-MOH. The minimum training duration is 4 years, and the maximum is 7 years. At present, the training is conducted at the UM university hospital.

Stages of training

The programme is made up of two Stages which correspond to year 1-4, however the duration of each phase may extend beyond the year(s) depending on the trainee's progress.

Stage 1, (Year 1). The emphasis is on basic sciences, clinical knowledge and general rehabilitation management principles. These include; normal human anatomy and physiology, clinical skills, physical examination and assessment and the management of medical issues.

Stage 2, (Years 2 - 4), This builds on Stage 1 and focusses on clinical issues, mastering the physical examination skills associated with disability and impairment, forming Rehabilitation plans and working with and leading multidisciplinary teams.

The stages and syllabus are further detailed below and in the Postgraduate Curriculum for Rehabilitation Medicine.

In-training assessments are scheduled throughout the training and include workplace-based assessments (WPBA), a logbook of clinical cases and procedural skills, research/audit/quality improvement project, and a supervisor's/trainer's report. An annual review is scheduled at the end of each year to monitor the trainee's progress.

2. Entry Requirements

Prospective trainees must meet the academic and professional medical qualifications as outlined in this document with adequate clinical experience

Masters in Rehabilitation Medicine Entrance Requirements
ACADEMIC QUALIFICATIONS Degree of Bachelor of Medicine and Bachelor of Surgery from a recognised academic institution (or an equivalent approved by the Senate of university) Satisfies the Entrance Evaluation for applicants of Masters of Rehabilitation Medicine, which includes; Good academic transcripts Two (2) good referee reports/recommendations one of which must be from a Rehabilitation Medicine consultant. A pass in the Medical Specialist Pre-entrance Examination, (MedEX), for Rehabilitation Medicine. This is a written examination. Evidence of a good standard of written English language No disciplinary actions/reports International applicants must achieve at least a band of 7.0 for IELTS or a score of 80 for internet-based total for TOEFL.
and
PROFESSIONAL MEDICAL QUALIFICATIONS Qualifies for registration as a medical practitioner under the Medical Act 1971, (Act 50), of Malaysia. Minimum two-years of post-full registration clinical experience with Malaysian Medical Council, (MMC), approved by the Senate of which, at least one year is spent in the inpatient care. For international applicants, it is compulsory to have the Temporary Practicing Certificate, (TPC), issued by the Malaysian Medical Council prior to the entrance to the postgraduate training. Information for TPC registration can be found at https://mmc.gov.my/certification/
and
Professional clinical experience requirement Prior to entry into the Masters of Rehabilitation Medicine programme, it is compulsory, for trainees to have experienced working in a Rehabilitation Medicine environment for a minimum cumulative period of one (1) year, with specific exposure to interdisciplinary management in rehabilitation medicine clinical practice. This must be evidenced by the ability of the candidates to perform specified tasks at the beginning of specialty training as per Entry Essential Learning Activity (ELA)* (Refer to the Appendices)

Entry Essential Learning Activities (ELAs)

Entry ELAs are clinical activities that prospective trainees should be able to perform in a trustworthy manner by the time they enter the postgraduate training in Rehab Med. Each Entry ELA describes the knowledge, skills and attitudes that a trainee is expected to possess, as well as the desired positive and undesired negative and negative passive behaviours.

"An ELA is the identification and description of a clinical task in such a way that the trainee is fully aware of the Knowledge, Skills and Attitudes needed to complete the task and the trainer is fully aware of what needs to be observed to deem the task completed to a professional level."

- Frostick SPF, Pitts D. Essential Learning Activities (ELA). Residential Curriculum Workshop 2017.

The Entry ELAs have been selected to represent the typical and basic day-to-day work in Rehab Med. They indicate the knowledge, skills and attitudes that the trainees need to be aware of when carrying out the tasks and responsibilities. They also serve as learning opportunities for prospective trainees when they are tasked to undertake the activities, and then receive feedback regarding their performance.

There are six Entry ELAs for Rehab Med:

ELA 1	Conduct comprehensive history taking which includes basic functional history, especially for common neurological and musculoskeletal conditions
ELA 2	Perform thorough and systematic clinical examinations. Specifically, on examinations of the Neurological & Musculoskeletal systems
ELA 3	Interpret basic clinical investigations
ELA 4	Competently manage common acute medical and surgical emergencies within rehabilitation medicine practice
ELA 5	Competently manage Autonomic Dysreflexia in spinal cord injury patients.
ELA 6	Perform Spasticity assessments on affected patients with neurological conditions

It is essential that prospective trainees can demonstrate that their clinical experience has resulted in them having acquired the appropriate knowledge, skills and attitudes that prepares them for postgraduate training. Applicants for the postgraduate training in Rehab Med are expected to present their logbook of procedures and activities during the Selection for Postgraduate Training as evidence that they have completed all Entry ELAs, and may expect to be asked questions during the selection process about their Entry ELAs.

The complete set of the Entry ELAs can be found in the appendices of this document.

3. Entry Process

Applicants from the Ministry of Health need to apply through the 'Sistem Permohonan Hadiah Latihan Persekutuan, (HLP)'s website at ehlp.moh.gov.my.

Applicants who are not from the Ministry of Health are required to apply to the University of Malaya, the online application is through the http://ips.um.edu.my website. The application status can be checked online at http://pgadmission-status.um.edu.my from two months after the application procedure is completed and confirmed.

Following application, the entry process is a three-stage candidate evaluation;

1. All applicants are required to sit for the Medical Specialist Pre-Entrance Examination, (MedEX), for Rehabilitation Medicine, conducted by the Malaysian Examination Council, (MEC). Information on registration for MedEX can be found at either of the following links:

   apps.mpm.edu.my/medex/public/register

   portal.mpm.edu.my/web/guest/medex
2. Applicants who have passed the MedEX are then required to submit their portfolios for review.
3. Interview and Objective Structured Clinical Examination, (OSCE). Applicants will be called for the interview in January of the following year. The final list of successful applicants will be decided and made available by April of the same year for the postgraduate training intake in June of each year.

The tables below summarise the entry process for Rehab Med training.

Timeline of the entry process

Application Entry Process and Timeline	
MOH applicants	Applications are made online at ehlp.moh.gov.my The application is to be completed by July of each year.
Overseas/Private applicants	Applications to the University of Malaya, online at http://ips.um.edu.my The application is to be completed by July of each year.
Screening of applications	Completed by end of October
Interview and OSCE	January each year
Outcome of process	April each year
Briefing	End of May each year. Report to the University June each year.

Application Evaluation	
Medical Specialist Entrance Examination (MedEX)	MedEX is a written examination consisting of 100 Single Best Answer, (SBA), questions. These are made up of basic science questions, common medical and surgical based clinical cases and a small number of basic principles in rehabilitation medicine evaluation and management.
Portfolio submission and review	A portfolio must be submitted and consist of the evidence of the applicants' professional qualifications and clinical experience. It is compulsory for the applicants to complete the portfolio requirements and submit it to the postgraduate training institution, after passing the MedEX. Applicants will be called for interview by the training institution only following a satisfactory portfolio review.
Interview and OSCE	The interview will be based on the clinical knowledge as well as clinical experience, opinions in rehabilitation medicine and assessment, and on communication aspects. OSCE is also an essential part of the entrance assessment, and may include clinical management on basic medical and surgical conditions as well as basic rehabilitation knowledge.

Induction Process

Clinical training in Rehabilitation Medicine starts with an induction program, which is in place to ensure that trainees are familiar with the relevant clinical areas and practice. The orientation phase for Rehabilitation Medicine Clinical practice includes the following:

Immersion program (2-4 weeks); consists of short lectures and rotations at various divisions in Rehabilitation Medicine i.e. rehabilitation clinics and wards, allied health's clinical areas, prosthetics and orthotics.

Attendance at the induction process is compulsory. Failure to attend will result in the trainee not being able to commence their training.

4. Syllabus

The syllabus defines what will be taught or learned throughout training in Rehab Med. It is an outline of the required subjects and competencies to be achieved by the trainee during each stage of the programme. The syllabus helps to set the expectations for both trainer and trainee as to what should be achieved during each stage.

Stage 1: is the first year (Year 1). The emphasis is on basic sciences, clinical knowledge and general rehabilitation management principles. At the end of Stage 1, the trainee is expected to be able to:

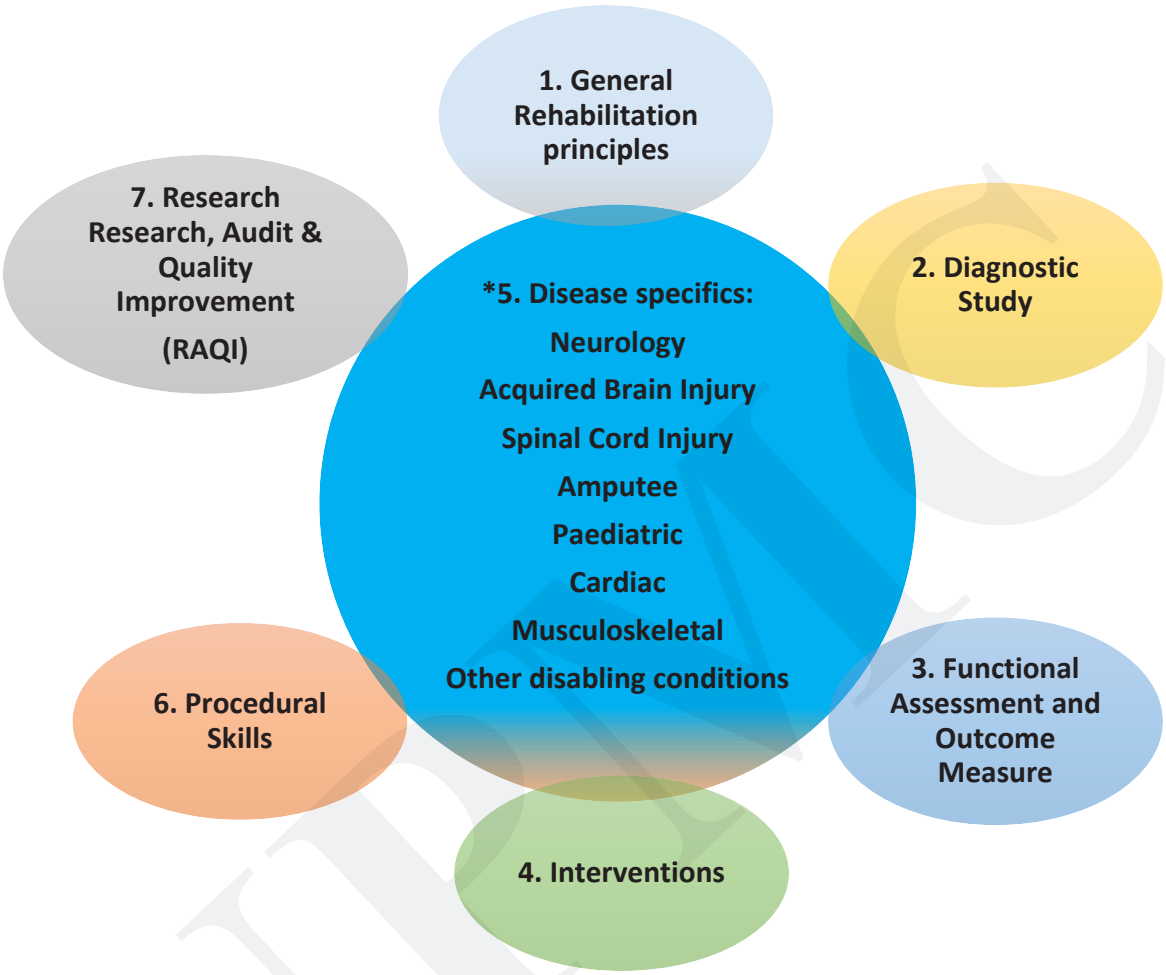
- Describe normal human anatomy and physiology relevant to the practice of Rehabilitation medicine
- Develop clinical skills and the competency to take rehabilitation history, physical examination and make differential diagnoses
- Explain the pathophysiology of common clinical conditions seen in Rehabilitation Medicine
- Manage medical issues related to common conditions seen in Rehabilitation Medicine and interpret relevant laboratory and imaging results
- Short clinical rotations at specialty areas in the first year of the program:
    - Neuromedical rehabilitation
    - Acquired Brain Injury rehabilitation
    - Spinal Cord Injury rehabilitation
    - Amputee rehabilitation
    - Paediatric rehabilitation

Stage 2 is the second year to fourth year, (Years 2-4). The trainee can only progress to Stage 2 after achieving satisfactory WPBAs, Supervisor Annual Review (based on In-training portfolio) and a satisfactory pass in the Stage 1 final written and clinical examination. The emphasis in Stage 2 will be on clinical issues and management in Rehabilitation Medicine. At the end of Stage 2, the trainee is expected to:

- Master physical examination skills for diseases associated with impairment and disability
- Display the ability to interact and work with multidisciplinary team members in different settings and demonstrate leadership quality
- Decisions on the most appropriate rehabilitation plans for specific conditions using critical thinking skills and available scientific evidence
- Demonstrate an aptitude for continuous professional development and utilise the concept of evidence-based medicine in their daily practice

There are 7 themes that together make up the syllabus of the Masters of Rehabilitation Medicine Curriculum. The pictorial below outlines the coverage of the syllabus which is described in detail in the Rehabilitation Medicine Curriculum document.

Syllabus Overview



** The **Disease specifics** modules at the centre of this diagram depicts that they are relevant to all of the other modules*

5. Assessment Tools

Assessment is an essential part of training and reflects the clinical activities that the trainee will perform as a Rehab Med specialist. These include clinical activities relating to the care of individual patients, and non-clinical activities relating to administrative and organisational tasks, and academic skills.

The assessment strategy in Rehab Med has three primary functions:

1. To encourage and monitor learning through formative (workplace-based assessment, WPBA) tools.
2. To evaluate whether the trainee is ready to progress through the programme through summative tools.
3. To generate and evaluate evidence that the trainee is able to care for patients in a safe and effective way as a specialist.

There are primarily two types of assessments which can be summarily categorised as Formative and Summative.

1. **Work Place Based Assessment, (WPBA)**

   The purpose of work-place based assessments is to facilitate and improve learning by providing trainees immediate feedback in a real clinical environment, provide reflections, measure their performance and identify areas of development.

2. **Summative Assessment: Written and Clinical Examinations**

These are written and clinical examinations on knowledge and clinical skills, to provide evidence demonstrating that trainee has met the curriculum standard at the different stages of training.

The assessment strategy and tools are summarised in Tables 1 and 2.

Table 1: Assessment Strategy and Tools

ENTRY	IN-TRAINING	EXIT (Stage 1 and Stage 2)
MedEX Single Best Single Best Answer (100 questions) Questions consists of basic sciences and applied clinical questions both medical and surgical based Candidates need to gain a satisfactory pass to obtain the **Certificate of Completion** of the basic science exam in Rehabilitation Medicine	**WPBA** **Case-based Discussion, (CbD)** Ability to elaborate and discuss valid and reliable management options, steps and decisions. Elaborate and discuss valid and reliable management options for various issues in rehabilitation medicine practice. Communicates the steps of management and final decisions on case-by-case basis.	**Pre-requisites** Supervisor Annual Review (Stage 1 & 2) Research component (Stage 2) All trainees have to satisfactorily achieving/ evidencing WPBAs, portfolio (logbook & cv) and research component as appropriate – i.e. reviewed and signed off by the trainer/supervisor.

ENTRY	IN-TRAINING	EXIT (Stage 1 and Stage 2)
Portfolio The Portfolio must include a logbook and curriculum vitae, that demonstrates a professional background and clinical experiences (See Appendices for the details in Portfolio)	**Directive Observed Procedural Skills (DOPS)** To assess the trainee's clinical skills in core procedures. Conducting clinical procedures in terms of safety, ethics and effectiveness as well as performing clinical procedures based on its standard operating procedure effectively. DOPS can guide the trainee's learning and competency	**Examinations** Written: Single Best Answer (SBA) Clinical examination: Objective Structured Clinical Examination (OSCE) Long clinical case examination
Interview A verbal interview to assess the candidate's views and opinions on the field and specialty as well as personal communication skills and interactions.	**MiniCEX (Mini-Clinical Evaluation Exercise)** For specific clinical evaluation covering the areas of trainee's competencies in the workplace which includes history taking, physical examination and clinical reasoning Assessment areas will include: Rehabilitation evaluation in different types of cases, consisting of focused history taking, physical examination and rehabilitation management. Communication skills on how findings and results are conveyed to patient.	
Objective Structured Clinical Examination (OSCE) Assessment of the relevant parts of the entrance ELAs particularly on clinical evaluation and management, See Appendices for ELAs.	**Portfolio** The Portfolio must include a logbook and curriculum vitae, that demonstrates a professional background and clinical experiences	

ENTRY	IN-TRAINING	EXIT (Stage 1 and Stage 2)
	Research Component Research proposal presentation, (by the mid of the 2nd year) Research progress report and presentation; trainees are expected to complete two sessions. Research manuscript; must have at least a proof of submission for publication with an assessment by an external examiner. This is a pre-requisite for final examination in Stage 2 A minimum of one case report/case series manuscript prepared and sent for publication to journal OR a minimum of two abstract accepted for conference, (either oral or poster).	

Table 2: In-Training Assessment: Minimum number of WPBAs

Year	Year 1		Years 2-4		
WPBA	MiniCEX (No.)	Cbd (No.)	MiniCEX (No.)	Cbd (No.)	DOPS (No.)
Clinical posting:					
Neuromedical Rehabilitation	1	1	2	2	2
Acquired Brain Injury Rehabilitation	1	1	2	2	2
Spinal Cord Injury Rehabilitation	1	1	2	2	2
Amputee Rehabilitation	1	1	2	2	2
Paediatric Rehabilitation	1	1	2	2	2
Cardiac Rehabilitation			2	2	2
Musculoskeletal Rehabilitation			2	2	2

6. Appendices

All items on the tables below are examples and do not constitute and exhaustive list.

Entry ELA-1

Activity	Conduct comprehensive history taking
Description	History taking includes basic functional history, especially for common neurological and musculoskeletal conditions

Knowledge Know, Facts, Information	**Skills** Do, Practical, Psychomotor, techniques	**Attitudes & Values** Feel, behaviours displaying underlying values or emotions
Basic medical science including physiology, anatomy and biochemistry Pathophysiology and clinical presentation of the common neuro-musculoskeletal conditions encountered in rehabilitation medicine. List of common conditions are: Stroke Cerebral Palsy Traumatic brain injury Spinal cord injury Lower limb amputation Osteoarthritis Rheumatoid arthritis History must include: Comprehensive medical history Includes pre-morbid and current functional history	Communication skills Appropriate mannerism and language Good eye contact, gestures and body language Engaging family members in taking history Using questions skillfully in building trust & rapport Maintaining professional conduct at all times Efficient time management, maximum clerking one case within 30 minutes Able to summarise and present a focused history Able to derive a provisional diagnosis, and differential diagnoses based on history taken	Polite: Using appropriate and respectful salutations for patients and family members Patience: Ability to communicate and manage a challenging patient's situation Empathy Show self-confidence in communicating with patients e.g. dress appropriately, speak in a positive manner and able to express conviction

Example Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard patient care, things a trainee might forget to do
Introduce oneself and explain the purpose of history taking Acquire consent prior to taking history Conduct history taking in systematic and organised manner (clear & logical sequence) Summarise history concisely Attentive during history taking Maintaining professional conduct at all times	Poor time management (e.g. taking more than 1 hour for new case and more than 30 minutes for a follow up case) Unprofessional conduct during interview (e.g. asking irrelevant questions or not maintaining professional boundaries) Unable to summarise, analyse and conclude issues from the history taking	Forgetting to take important and relevant aspect of history from the patient (e.g. not inquiring about functional history in a patient with spinal cord injury) Not introducing oneself Not acquiring consent before history taking
Assessment / Evidence		
Report from referees (physician) Portfolio – logbook Pre-entrance OSCE		

Entry ELA-2

Activity	Perform a thorough and systematic clinical examination competently
Description	Specific examinations of the Neurological & Musculoskeletal systems

Knowledge Know, Facts, Information	**Skills** Do, Practical, Psychomotor, techniques	**Attitudes & Values** Feel, behaviours displaying underlying values or emotions
Basic medical science including physiology, anatomy and biochemistry Pathophysiology and clinical presentation of the common neuro-musculoskeletal conditions encountered in rehabilitation medicine. Basic step-wise knowledge in neurological examination Basic step-wise knowledge in musculoskeletal examination for different joints, especially: shoulder joint knee joint hip joint foot and ankle joint spine	Perform neurological examinations in appropriate sequence and able to distinguish between upper motor neuron and lower motor neuron signs Competent in performing basic musculoskeletal examination in terms of: ability to perform range of motion (ROM), examination for all joints competent to perform specific examinations for shoulder joint, knee joint, foot and ankle and spine in appropriate sequence (look, feel and move joint) Efficient time management, in performing a specific examination within 15-20 minutes	**Polite**: using appropriate and respectful salutations for patients and family members. Explain and obtain patients consent before performing clinical examination Acknowledge and protect patients' modesty **Patience**: able to communicate and manage a challenging patient's situation Empathy

Example Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard patient care, things a trainee might forget to do
Conduct clinical examination in systematic and organised manner Summarise the clinical examination findings and able to conclude into a provisional diagnosis	Performing clinical examinations in such a way that may cause safety issue with patient Indecisive in the next step of an examination and takes a long time to complete task Unable to analyse and conclude examination findings Dismiss patients' complaints during clinical examination e.g. pain and discomfort	Not introducing oneself Not acquiring consent before conducting physical examination Missed common concomitant problems i.e. pain, joint contracture
Assessment / Evidence		
Report from referees (physician) Portfolio – logbook Pre-entrance OSCE		

Entry ELA-3

Activity	Interpret basic clinical investigations
Description	Basic blood parameters e.g. FBC, Renal profile, Liver function, Urinalysis and arterial blood gases (ABG) Radiological Imaging i.e. x-ray of the chest, abdomen or limbs, CT scan of the brain Electrocardiogram

Knowledge Know, Facts, Information	**Skills** Do, Practical, Psychomotor, techniques	**Attitudes & Values** Feel, behaviours displaying underlying values or emotions
Normal and abnormal values of basic blood parameters e.g. FBC, Renal profile, Liver function, Urinalysis and arterial blood gases (ABG) Normal and abnormal radiological findings on chest x-ray, limb x-ray, abdominal x-ray and plain CT scan of the brain Normal and abnormal findings on electrocardiogram (ECG), particularly for common arrhythmias, myocardial infarction (MI) and non-STEMI	Order investigations appropriately based on clinical indications Interpret normal or abnormal investigations findings	Prioritise important investigations before ordering them Value risks and benefits before ordering investigations
Example Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard patient care, things a trainee might forget to do
Able to correctly interpret laboratory and imaging findings Respond to abnormal investigations findings appropriately and initiate further management	Dismiss the abnormal investigations findings	No clear clinical indications when ordering different investigations
Assessment / Evidence		
Pre-entrance OSCE		

Entry ELA-4

Activity	Competently manage common acute medical and surgical emergencies within rehabilitation medicine practice
Description	

Knowledge Know, Facts, Information	**Skills** Do, Practical, Psychomotor, techniques	**Attitudes & Values** Feel, behaviours displaying underlying values or emotions
Common acute medical & surgical complications related to neurological and musculoskeletal conditions in the following aspects; clinical signs & symptoms and early management. List of common medical & surgical emergencies: Hypertension Hypoglycaemia, diabetic ketoacidosis Acute coronary syndrome Infections e.g. pneumonia, urinary tract infection Electrolyte imbalances Acute intestinal obstruction Seizure Clinical problems which needs further referral and management from other specialise unit	Early identification of the clinical signs of the common acute medical & surgical emergencies Evaluate and come suggest differential diagnoses Order urgent investigations accordingly Initiate appropriate management	Thorough and diligent in performing clinical work Calm in dealing with acute emergencies Prioritise patients' safety first Vigilant and always aware of possible emergencies Assume responsibilities in managing patients

Example Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard patient care, things a trainee might forget to do
Respond immediately to the alert by other healthcare professionals e.g. nurses, therapists	Procrastinate Oblivious to patient's situation in the ward Dismissing alert Vague in giving clinical instructions	Failure to ask support from others Not escalating to the superiors when required Failure to make a timely referral to an appropriate specialty unit when needed Managing the complex acute emergencies alone
Assessment / Evidence		
Portfolio – logbook Pre entrance OSCE		

Entry ELA-5

Activity	Management of Autonomic Dysreflexia (AD) in patients with spinal cord injury
Description	AD is a specific and common medical emergency in spinal cord injury condition

Knowledge Know, Facts, Information	**Skills** Do, Practical, Psychomotor, techniques	**Attitudes & Values** Feel, behaviours displaying underlying values or emotions
Basic medical science including physiology, anatomy of the autonomic nervous system and autonomic dysreflexia (AD) Definition, pathophysiology and clinical presentation of AD Common causes of AD Initial steps and further management of AD	Early identification of clinical signs of AD Initiate initial management as soon as possible Immediate order to obtain assistance Appropriate monitoring of blood pressure, (every 2-5 minutes until AD episode resolves)	Thorough and diligent in performing clinical work Calm in dealing with acute emergency situation Prioritise patients' safety first Vigilant and always aware of possible complications Assume responsibilities in managing patients
Example Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard patient care, things a trainee might forget to do
Respond immediately to the alert by other health professionals e.g. nurses, therapists	Procrastinate Oblivious to patient's situation in the ward Dismissing alert Vague in giving clinical instructions	Failure to ask support from others Not escalating to superiors when required Failure to make a timely referral to an appropriate specialty unit when needed Managing the complicated situation alone
Assessment / Evidence		
Portfolio – logbook Pre-entrance OSCE		

Entry ELA-6

Activity	Perform Spasticity assessment on patients with neurological conditions
Description	Spasticity assessment based on Modified Ashworth Scale (MAS)

Knowledge Know, Facts, Information	**Skills** Do, Practical, Psychomotor, techniques	**Attitudes & Values** Feel, behaviours displaying underlying values or emotions
Basic clinical presentation of the spasticity Basic step-wise knowledge in spasticity examination Able to use common specific outcome measure in spasticity examination i.e. Modified Ashworth Scale (MAS). Able to recognise spastic muscle involvement	Perform spasticity examination in appropriate sequence Competent in grading the spasticity based on MAS Efficient time management, in performing a specific examination within 3-5 minutes for each muscle	Polite: using appropriate and respectful salutations for patients Explain and take patients consent before performing clinical examinations Acknowledge and protect patients' modesty Patience: able to communicate and manage a challenging patient's situation Empathy
Example Behaviours		
Positive Things that should be done, correct techniques or practices, things a trainee might do right	**Negative** Things that should not be done, incorrect techniques or practices, things a trainee might do wrong	**Negative Passive** Things that may be forgotten or omitted that constitute incorrect or substandard patient care, things a trainee might forget to do
Introduce oneself and explain the purpose of the clinical examination Acquire consent prior to clinical examination Maintaining professional conduct at all times	Taking too long and repetitive examination in assessing spasticity on specific muscle Unable to summarise, and conclude spasticity grading based on MAS Hasty examination technique i.e. repetitive movement	Not introducing oneself Not acquiring consent before history taking
Assessment / Evidence		
Portfolio – logbook Pre-entrance OSCE		

Entrance Portfolio Checklist

Portfolio Contents/Sections

There are two main sections in the portfolio, which applicants must complete prior to the interview for the Masters in Rehabilitation Medicine:

1. Curriculum vitae

Compulsory details:

- Basic personal background
- Education background; secondary up to and including medical degree
- Clinical experience; from houseman up to medical officer which includes experience in Rehabilitation Medicine clinical practice
- Scholarly activities i.e. participating **OR** presenting, (oral or poster), in conferences and courses related to Rehabilitation Medicine, **AND/OR** any publications
- Compulsory course; Advanced Cardiovascular Life Support, (ACLS) **OR** a minimum of Basic Life Support, (BLS)
- Community involvement and contributions i.e. participation as participants or committee member in any community work

Other useful and optional information:

- Any other postgraduate experiences
- Prizes, awards

*****Please ensure that all educational qualifications, clinical experiences and activities must be supported by certified evidence i.e. certificates or formal letters***

2. Logbook

The logbook should list the clinical cases and activities an applicant has carried out, which must be certified by the respective specialist or consultant in charge within the last **1 year of clinical practice**. The **COMPULSORY** content follows the essential learning activities, (ELAs), that a candidate must have completed before becoming a trainee in Rehabilitation Medicine specialty training.

Compulsory content in a logbook:

NO.	CLINICAL CASES/ CLINICAL EXAMINATION	Details of clinical cases seen (Diagnosis & RN)	Date	Specialist's/ Consultant's signature
1.	Clinical encounters and management of common cases seen in rehabilitation medicine practice List of common neurological and musculoskeletal conditions: *(minimum of **10** clinical cases for each condition, stated below)*			
	Stroke			
	Traumatic brain injury			
	Spinal cord injury			
	Lower limb amputation			
	Cerebral palsy			
	Osteoarthritis			

NO.	CLINICAL CASES/ CLINICAL EXAMINATION	Details of clinical cases seen (Diagnosis & RN)	Date	Specialist's/ Consultant's signature
2.	Perform thorough and systematic neurological and musculoskeletal clinical examinations (minimum of 10 examinations done for EACH *neurological and musculoskeletal* clinical examination)			
3.	Manage common medical and surgical emergencies List of clinical cases: *(minimum **10** out of the conditions listed below)*			
	Uncontrolled hypertension OR Hypertensive crisis			
	Hypoglycaemia			
	Diabetic ketoacidosis OR Hyperosmolar non-ketotic coma			
	Acute coronary syndrome			
	Infections e.g pneumoniae, urinary tract infection			
	Electrolyte imbalances e.g hyponatremia, hypokalaemia, hyperkalaemia			
	Acute seizure			
	Acute abdomen			
	Altered conscious level			
	Upper gastrointestinal bleeding			
	Deep vein thrombosis OR Pulmonary embolism			
	Orthostatic hypotension			
	Autonomic dysreflexia			
4.	Perform Spasticity assessment on patients with neurological conditions based on: Modified Ashworth Scale (MAS) *(Minimum of **10** spasticity assessments)*			

Glossary of terms

CBD	Case-Based Discussion
ELA	Essential Learning Activities
IELTS	International English Language Testing System
MARP	Malaysian Association of Rehabilitation Physician
MEC	Malaysian Examination Council
MedEx	Medical Specialist Pre-Entrance Examination
MiniCEX	Mini-Clinical Evaluation Exercise
MMC	Malaysian Medical Council
MOE	Ministry of Education
MOH	Ministry of Health
NPMC	National Postgraduate Medical Curriculum
NSR	National Specialist Registry
REHAB MED	Rehabilitation Medicine
OSCE	Objective Structured Clinical Examination,
ST	Specialty Training
TOEFL	Test of English as a Foreign Language
UK	United Kingdom
UM	Universiti Malaya
UKM	Universiti Kebangsaan Malaysia
USM	Universiti Sains Malaysia
UPM	Universiti Putra Malaysia
WPBA	Workplace-Based Assessment

Contact

National Postgraduate Medical Curriculum
npmcmy@gmail.com

e ISBN 978-967-19546-9-0

9 789671 954690