



MALAYSIAN THORACIC SOCIETY LUNG FUNCTION TESTS EDUCATION PROGRAMME

INTRODUCTION TO THE MTS LFT EDUCATION PROGRAMME

Lung Function Tests (LFT) are vital tests used by the Respiratory Speciality for diagnostic and monitoring purposes. They include Peak Expiratory Flowmetry, Spirometry, Plethysmography, Lung Diffusion capacity study, 6 minute walk test and Cardio-Pulmonary Exercise Test.

Malaysian Thoracic Society (MTS) has taken the lead in providing a standard training programme for health care providers in Malaysia. The MTS Basic Lung Function Tests Certification programme aims to provide formal and standardised training following international standards.

In 2012, the programme started with the formation of a MTS Education committee to design the training modules for LFT appropriate for the local setting. MTS sent two of its members for training by attending the European Respiratory Society (ERS) Spirometry Driving License course. They completed their training in 2013 and were certified as providers and trainers. The programme was also approved and recognised by the Director of Health Malaysia, Datuk Dr Noor Hisham Bin Abdullah in 2014. The first edition of the reading materials was published in 2014 and was registered under ISBN in 2015 (ISBN 978-967-13419). All reading and course materials were formulated after many hours of discussions by the MTS LFT Education committee members to suit both local practice and International guidelines (ERS and American Thoracic Society (ATS) Guidelines).

BASIC LUNG FUNCTION TESTS CERTIFICATION (Provider Course)

This was the first initiative by MTS to provide standardised training for healthcare personnel. The provider course consists of three phases. Phase 1 comprises a one and a half day course focussing on theoretical knowledge. At the end of the Phase 1 course, candidates are required to sit for a written examination. Phase 2 consists of practice and training at their respective centres under supervision. A completed log book must be submitted to the Malaysian Thoracic Society LFT committee at least 4 weeks prior to Phase 3 course held a few months after the Phase 1 course. Phase 3 course comprises another one and a half day course focussing on the practical aspects of spirometry testing. The candidate is assessed and evaluated at the end of the course. Upon successful completion of the courses, log book and examinations, candidates will be certified as Basic LFT Provider by the Malaysian Thoracic Society and Ministry of Health Malaysia.



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The main objective of the programme is to provide standardised basic knowledge and skills for all healthcare personnel involved in LFT especially spirometry in hospital or primary care settings (Public, Private or University settings). The objectives are to ensure the healthcare personnel:

1. Understand fundamental and basic science of children and adult respiratory system
2. Performs and interprets peak expiratory flow test following the standard outline
3. Performs good basic spirometry tests following the standard guideline
4. Recognises problems and limitations in spirometry testing
5. Understands Infection and quality control of spirometry equipment and laboratory.
- 6.

Programme for Basic LFT Certification Course (Provider course)

The course for the providers will consist of three phases. Phase 1 involves one and a half day course followed by Phase Two which involves record and log book assignment. Phase Three involves another one and a half day course which will consolidate both knowledge and skills. The outline of the programme is as below:

Day 1

0830-0845: Welcome and Introduction to Basic LFT Certification Course

0845-0915: Functional anatomy of respiratory system

0915-0945: Fundamental physiology of respiratory system

0945-1000: QUIZ

1015-1045: Peak expiratory Flow

1045-1115: Spirometry: Indications and Contraindications

1115-1130: QUIZ

1130-1200: Practical sessions on Peak expiratory flow measurement

1200-1230: Principles of Spirometry test and Spirometric values

1400-1445: ATS/ ERS Guidelines on Performing Spirometry

1445-1515: Quality assurance in spirometry

1530-1700: Practical spirometry

- Principle of Spirometer*
- Infection control and Quality control*
- Performing Spirometry*

Day 2

0815-0845: Preparing spirometry report and interpretation of results

0845-0930: Spirometry results and case discussion

0930-0950: Spirometry in Asthma and COPD Guidelines

1010-1030: Special Considerations

1030-1230: Revision and Written test

1200-1230: Preparation for Phase II and III Basic LFT Certification Course



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Candidates will be given guidelines and checklists to assist them during the Phase 2 period so that they can complete their log books. They can also access the advice from a named trainer.

The outline of the programme for Phase 3 is as below:

DAY 1

0830-0840: Welcome and Introduction

0840-0910: Overview of Spirometry and Peak Expiratory Flow

0910-0940: Common Respiratory Diseases: COPD and Asthma

0940-1000: Other Respiratory Diseases

1020-1045: Introduction of skill workshop

1045-1300: Skill Workshops

- i. Know your Spirometer equipment*
- ii. Quality control (Calibration and verification)*
- iii. Spirometry tests*

1300-1400: LUNCH

1400-1600: Workshop: Spirometry Results Interpretation

- i. Lung Diseases I*
- ii. Lung Diseases II*
- iii. Lung Diseases III*

1615-1700: Candidate meets Trainer session

Day 2: 15th October 2017

0800-0830: Registration

0830-1200: Briefing of Practical examination

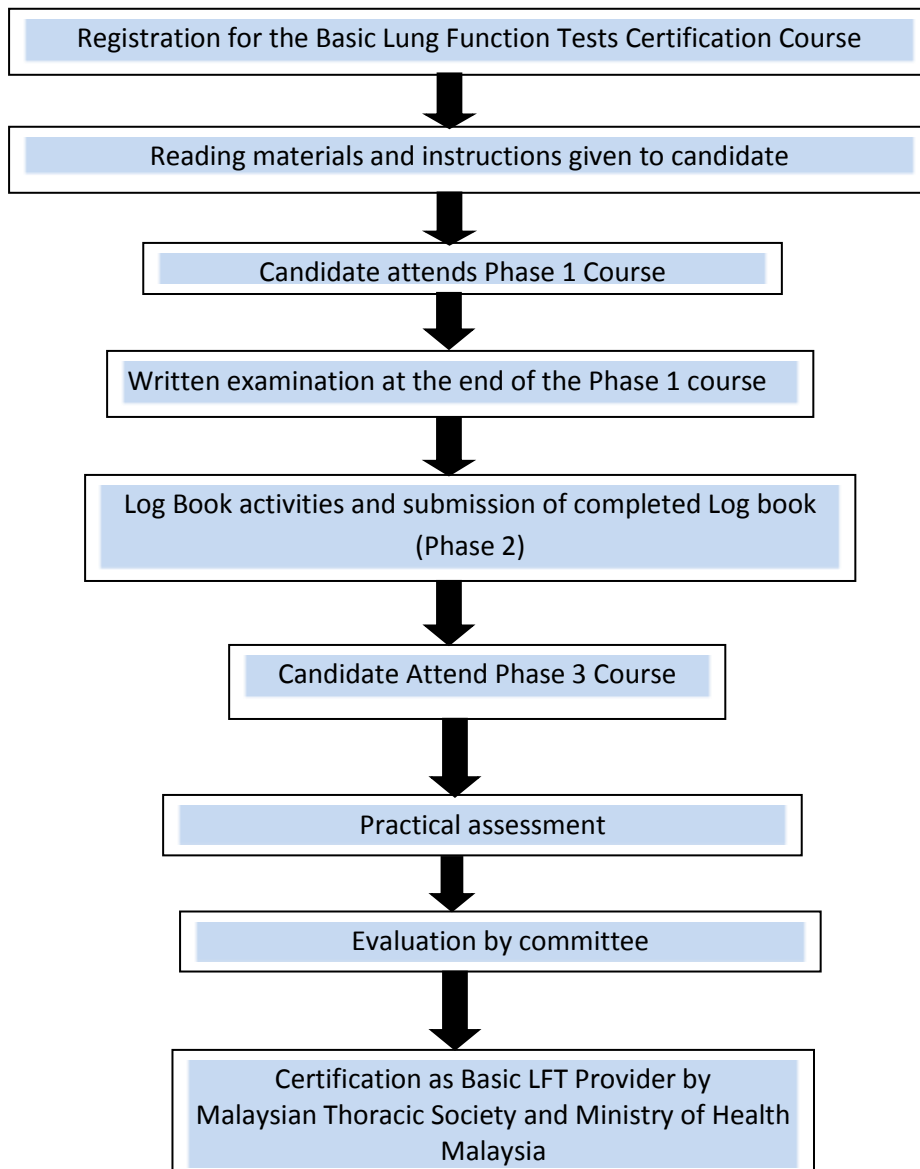
1200-1230: Summary and Conclusion



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CRITERIA FOR FULL CERTIFICATION IN BASIC LUNG FUNCTION TESTS

1. Full attendance of all didactic lectures and practical sessions in Phase I and Phase 3
2. Pass in the written assessment
3. Pass in the practical assessment
4. After completion of the Phase 1 course, the candidate will complete and submit their log book to the MTS LFT Education committee within stipulated time
On-site supervisor will be a Respiratory Physician/ Paediatrician/ Physician
5. Education Committee will decide upon completion of all tasks.
6. Certificate as provider given by Malaysian Thoracic Society and Ministry of Health Malaysia





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BASIC LUNG FUNCTION TESTS: TRAIN THE TRAINERS

The main objective of the course is to train trainers for the Basic LFT Certification Programme. The trainers are required to complete Basic LFT Certification Course before they can attend the Train the Trainers Course. The first course was conducted by the two trainers certified by ERS as trainers. The training involves one day course and to co-training in the Phase 1, 2 and 3 phases before they can be certified as a trainer for Basic LFT Certification Programme.

SPRIOMETRY FOR PRIMARY CARE PRACTITIONERS

This is the second initiative by MTS to provide a platform for Primary Care Practitioners in Malaysia to gain knowledge and skills to manage respiratory diseases especially Chronic Obstructive Airway Diseases (COPD). The module and course materials were prepared by the MTS LFT Education committee. The first course was conducted in 2016 and has been organised annually.

The objectives of the programme are:

1. To educate primary care practitioners regarding basic knowledge of spirometry
2. To provide skills in performing spirometry tests
3. To apply the knowledge and skills in clinical practice

The course does not include any examination and log book assessment. The outline of the programme is as below:

0900-1000: Registration

1020-1050: An Overview of spirometry in clinical practice

1050-1120: Understanding principles of spirometry

1120-1150: Manoeuvres and Quality Control in spirometry

1150-1230 Interpretation of spirometry tests

1415-1700: Skill Stations: Choosing your spirometer

Quality assurance and calibration in spirometry

Performing spirometry and documenting spirometry results

Spirometry report preparation and Interpreting spirometry tests

SUMMARY

MTS LFT Education committee will continue to improve and provide high quality programmes following the international standards to credential and privilege healthcare providers involves in LFT, especially spirometry, in Malaysia. The committee looks forward to future collaboration with many agencies including Ministry of Health Malaysia, Universities and the Private sector in order to enhance the programme and continue to be relevant to all healthcare personnel and teams involved in LFT.