



*The Hong Kong College of
Obstetricians and Gynaecologists*

*Maternal and Fetal Medicine Subspecialty
Training and Development*

2019

**A. TERMS OF REFERENCE OF MATERNAL AND FETAL MEDICINE
SUBSPECIALTY BOARD**

1. The Maternal and Fetal Medicine (MFM) Board is

- a. to uphold and improve the standard of MFM service in Hong Kong
- b. to improve knowledge, practice, teaching and research in the field of MFM
- c. to promote the concentration of specialized expertise and facilities to improve access to care
- d. to establish a close understanding and working relationship with other disciplines
- e. to encourage coordinated management of relevant clinical services throughout the region
- f. to strive for local, regional and international recognition of MFM as a subspecialty
- g. to formulate and to establish training guidelines
- h. to assess, to accredit and to monitor training centres, training programmes, trainers and trainees
- i. to coordinate continuous medical education in the field of MFM
- j. to organize and to conduct subspecialty examinations with the authorization of the Council of the HKCOG
- k. to recommend to the Council and HKAM candidates for the award and re-certification of MFM subspecialists

2. The MFM Board is

- a. under the auspices of the Subspecialty Committee and the Council of the HKCOG
- b. to liaise with the Education Committee on issues regarding training and examination of the subspecialty in MFM
- c. to liaise with the Manpower Committee/Working Group/Task Force on the training of MFM subspecialists
- d. to be composed of 5 to 9 members with a majority being MFM subspecialists. The subspecialist members should be elected amongst those subspecialists registered with the HKCOG. There should be at least one general specialist in the Board, who is to be appointed by the HKCOG Council. If possible, at least one member would come from each of the University / Hospital Authority / Private Sectors. The terms of office of Board members would be 3 years.
- e. to be chaired by a chairperson who is to be elected among the Board members every 3 years and endorsed by the Council. The chairperson should be a MFM subspecialist and the term of office will be 3 years. The chairperson is eligible for election for a maximum of 3 consecutive terms.

B. MATERNAL AND FETAL MEDICINE TRAINING PROGRAMME AND ACCREDITATION

1. Objectives

MFM subspecialists after completion of the training programmes should have acquired comprehensive knowledge and skill in the subject. They should have a broad knowledge of the physiology and pathology of the pregnant woman and the fetus. They must be clinically competent in the investigation and management of both medical and surgical disorders of both the mother and the fetus. They should be involved in the organization of the clinical service, in research, in postgraduate teaching and in providing a consultancy service to other obstetricians and gynaecologists in the area of MFM.

2. Curriculum Knowledge and skills

The training of a MFM subspecialist should include both knowledge and skill in the following 7 modules:

Module 1: Medical Complications in Pregnancy

Module 2: Genetics

Module 3: Structural Fetal abnormalities

Module 4: Antenatal Complications

Module 5: Intrapartum Complications

Module 6: Infectious Diseases

Module 7: Clinical and administrative Skills

2.1 Knowledge - a basic understanding of:-

- a. maternal physiology
- b. endocrinology of pregnancy
- c. embryology and teratology
- d. fetal physiology
- e. placental physiology
- f. biochemistry, pharmacology and pathology relating to the pregnant woman and the fetus
- g. genetics
- h. immunology
- i. social and psychological aspects of pregnancy
- j. legal and ethical issues
- k. epidemiology and statistics

2.2 Knowledge - a detailed understanding of the relevant aspects of related specialties and laboratory disciplines:-

- a. adult medicine, anaesthesia, resuscitation and intensive care
- b. neonatal medicine and surgery
- c. clinical and laboratory genetics
- d. laboratory based subjects including: microbiology, pathology, haematology, clinical chemistry, blood transfusion
- e. research methodology

2.3 Skills -

- a. expertise in diagnosis and management of medical and surgical complications of pregnancy
- b. expertise in diagnosis and management of infectious diseases in pregnancy
- c. expertise in fetal medicine including ultrasound examination and invasive procedures

- d. expertise in complicated obstetrics
- e. expertise in operative procedures and intrapartum management
- f. expertise in pre / post-pregnancy and bereavement counseling
- g. in administration and management
- h. in teaching
- i. in research and audit

C. MATERNAL AND FETAL MEDICINE TRAINING CENTRE AND TRAINER

1. Standard Requirements for accreditation of a Maternal and Fetal Medicine training centre

A MFM training centre must fulfill the following criteria:

1.1 Workload

An annual minimum of:

- a. have an adequate clinical workload with a full range of high risk maternal and fetal problems with at least 3000 deliveries per year
- b. 40 fetal abnormalities
- c. 200 high risk pregnancies / maternal disorders

1.2 Trainers and Programme Director

- a. A trainer must be a Fellow of HKAM(O&G) and a HKCOG accredited MFM subspecialist or equivalent, and should be working in the training centre.
- b. There must be at least 2 trainers per training centre.
- c. One of the trainers must be the training programme director who co-ordinates the training programme, accepts the main responsibility for its supervision and be actively involved in it. The director should have at least 3 years of post-subspecialty experience in MFM (with the exception of First Fellow in MFM) and is working as a full-time staff in the training centre.
- d. When a training centre comprises more than one physical unit, there should normally be at least one trainer in each unit.

1.3 Service organization

- a. provide an integrated service for the referral and transfer of high risk obstetric patients and fetal anomalies, in close collaboration with other obstetricians and disciplines within and outwit the centre, and including a full range of fetal monitoring and assessment techniques
- b. have established close collaboration with other obstetricians and gynaecologists in the clinical network, including major regional roles in continuing postgraduate education and training, research advice and co-ordination, and auditing activities
- c. have an in-house neonatal intensive care unit with specialist paediatricians and supporting staff, and an access to & support from a neonatal surgical unit
- d. have a 24-hour anaesthetic service with specialist anaesthetists and supporting staff available to cover obstetric requirements
- e. have a close working relationship with other medical disciplines as stated in session 1.5 below

1.4 Facilities

- a. A well-equipped labour ward that can provide continuous intrapartum fetal surveillance and intensive maternal monitoring for high risk cases
- b. An operating room and instruments for major obstetric surgery such as hysterectomy
- c. Ultrasound machines of sufficient quality and quantity for assessment of fetal morphology including echocardiography, and surveillance of fetal well-being with Doppler studies
- d. An operating room and instruments for invasive fetal procedures
- e. A good medical records system
- f. have adequate library, laboratory, internet access, statistic tools and other resources to support subspecialty work, training and research, over and above that required for the recognition of FHKAM(O&G) and higher training posts

1.5 Support from other medical disciplines

A training centre should have close collaboration with the following disciplines with adequate support at specialist level:

- a. In-house neonatal unit with intensive care facilities and able to treat major neonatal complications
- b. Surgical team able to perform surgical treatments for major malformations in the neonates
- c. Anaesthetic team able to deal with special obstetric complication, provide intensive adult care, and offer 24 hour anaesthetic service
- d. Physicians at subspecialty level able to offer care of medical disorders complicating pregnancy
- e. Medical genetic team able to provide special advice and counseling in genetic disorders
- f. Laboratories offering high quality testing in genetic, biochemical, microbiological, hematological and other relevant areas
- g. Anatomical Pathologist with special interest and commitment in perinatal pathology
- h. Diagnostic radiology and organ imaging service

1.6 Activities

Each centre should have:

- a. Special clinical activities for high-risk pregnancies, genetic counseling, level III ultrasound, invasive procedures and fetal surveillance
- b. Annual obstetric statistics including workload, maternal and fetal complications
- c. Regular perinatal morbidity and mortality meetings and other regular quality assurance activities related to the subspecialty
- d. Regular review and update of clinical management protocols
- e. A coordinated educational program at subspecialty level
- f. Clinical trials and research related to the subspecialty

2. Composition of a training centre

Usually a training centre comprises a single physical unit. However, two or more units may collaborate to form a training centre that can provide a better training opportunity than when each of them stands alone.

3. Inspection of a training centre

The standards of the training centres and programmes will be reviewed:

- a. every 5 years, or
- b. when the programme director changes, and
- c. from time to time when considered necessary

D. MATERNAL AND FETAL MEDICINE TRAINING PROGRAMME

1. Normally the training programme lasts for three years with two components: clinical and research

2. The training programme can be

EITHER:

- Two years of Clinical training in MFM, plus One year of Research related to MFM (which can be exempted, see 3a below).

OR

- Three years of Combined Clinical and Research training in MFM

3. Research component

a. 1 year of research training may be exempted if a trainee has, before starting the subspecialty programme, already:

- Completed a research or academic programme that has led to the award of an MD or PhD thesis,

or

- Published at least two first-author papers of original research in citable, refereed MEDLINE journals.

i. The papers do not need to be relevant to the chosen subspecialty of the trainee.

ii. If one paper has been accepted and the second paper is ready for submission, a grace period of 1 year can be given at the time of the application.

iii. If the second paper has not been accepted for publication at the end of one year of the subspecialty training, the trainee has to undertake research during the subspecialty training to fulfill the criteria as stated at the completion of a 3-year subspecialty program.

iv. Case reports and reviews would not normally be considered.

- b. For trainees who go for a research training:
 - the research component should be planned at the beginning of the programme and appropriately timetabled and monitored.
 - At completion of the 3-year Subspecialty programme, the candidate should have published one first-author paper of an original research relevant to the chosen subspecialty of the trainee in citable, refereed MEDLINE journal, preferably (but not necessarily) arising from a dedicated period of research lasting at least 1 year, **OR** completion of a research or academic programme resulting in the award of an MD or PhD thesis. Case reports and reviews would not normally be considered.
4. The trainees should have full time involvement in the subspecialty during normal working hours throughout their training years.
5. Trainees will be granted a maximum of 70 days for sick leave, maternity or other special leave (excluding standard entitled vacation leave and study leave) during the whole period of training; if the period exceeds 70 days but is less than 90 days, an extension of 3 months of training is required; if the period exceeds 90 days, subsequent action will be determined by the Board.

E. MATERNAL AND FETAL MEDICINE TRAINEE

1. Opening of a training post

- a. The training centre will advertise for prospective trainees to apply for a training position in the MFM Training Programme which leads to certification as a subspecialist in MFM.
- b. The centre's trainee-to-trainer ratio should not exceed 2:1 within each centre.

2. Eligibility

Trainees for higher subspecialist training should hold the FHKAM(O&G) or have equivalent qualification.

3. Application

- a. Prospective trainees will apply to the training centre for the post.
- b. Applicants will be asked to forward their curriculum vitae and the names of two referees.
- c. The training centre will organize the selection exercise.
- d. Applicants will be assessed against the following selection criteria:
 - i. Previous experience in the field of MFM
 - ii. Previous experience in advanced MFM techniques
 - iii. Previous CME activities related to MFM
 - iv. Experience in quality assurance activities
 - v. Research experience
 - vi. Teaching experience
 - vii. Referee reports

- e. The result of the selection exercise will be submitted to the MFM Board for approval before commencement of training.

4. Registration

Following the confirmation of acceptance to the subspecialty training programme, the trainee must register with the HKCOG Subspecialty Board before commencement of training.

5. Prospective approval to continue training

- a. Every year, application to continue MFM Training has to be approved by the MFM Subspecialty Board before training can proceed.
- b. Approval for continuation of training should be based on satisfactory logging of experience and the trainers' recommendation.

6. Evidence of clinical competence and experience

6.1 Logbook

- a. The trainee has to keep a logbook as required by the Board. The trainee is required to log his or her clinical activities, teaching experience, quality assurance activities, research activities and attendance at conferences, workshops, symposia and lectures and items as stipulated in details in the logbook. The logbook would be checked on the fulfillment of training requirements.
- b. There is no mandatory minimal number of cases or procedures that the trainee is required to log, but the following can serve as a guide to the expected number of cases and procedures expected for each trainee on average per year over the period of training:
 - i. 200 cases with maternal/fetal/perinatal disorders/complications
 - ii. 30 complicated obstetric operative procedures
 - iii. Ultrasound scanning of the following categories:
 - Level III scanning for 50 cases of fetal structural abnormalities including fetal echocardiogram
 - 100 cases of nuchal translucency measurement
 - 100 cases of fetal assessment using Doppler studies / biophysical profile
 - 50 cases of multiple pregnancies
 - iv. 100 cases of ultrasound guided needling procedures with or without direct supervision. These should include at least 10 cases of chorionic villous sampling. The level of skill attained must be such that the trainer can with confidence leave the trainee to perform amniocentesis and chorionic villous sampling without supervision

6.2 Mini Clinical Evaluation Exercise (Mini CEX)

The trainee should go through at least 5 Mini Clinical Evaluation Exercise (Mini CEX) AND 5 Case-Based Discussions (CbDs) every 6 months with his or her supervisor for at least 2 years during his or her training.

6.3 OSATS

The trainee should complete 6 summative OSATS during his or her training, including amniocentesis, chorionic villus sampling, external cephalic version, fetal echocardiography, advanced management in postpartum haemorrhage, and Doppler study of fetal circulation. There is no set number on the completion of each formative OSATS.

7. Assessment

7.1 Prospective Assessment

- a. The trainee is assessed by his or her trainer(s) every 6 months by logbooks of competence and experience, objective structured assessment of technical skill on various surgical skills, mini-clinical evaluation exercise and case-based discussion. The logbook should be regularly signed by trainer(s) where appropriate and submitted to the Subspecialty Board for review annually.
- b. The trainee is assessed in the annual assessment review which is conducted by two MFM Subspecialist assessors appointed by the Subspecialty Board within one month after the clinical training. The assessor will give feedback to the trainee regarding the adequacy of training as reflected in the logbooks of competence and experience, objective structured assessment of technical skill on various surgical skills, mini-clinical evaluation exercise and case-based discussion.

7.2 Exit Assessment

- a. At the end of the training, the trainee may apply to the Board to sit for the exit assessment. The trainee should submit the log books and the research report at the time of application for exit assessment. Evidence of research that would lead to fulfillment of the requirement as stated in Session D 3b is mandatory.
- b. The exit assessment should be held within 3 months of completion of training.
- c. The exit assessment should include the following:
 - i. There would be 2 MFM subspecialist assessors to be appointed by the Subspecialty Board to conduct the Exit Assessment. The 2 assessors should not be subspecialists from the trainee's training centre.
 - ii. The duration of the exit assessment would be at least 30 minutes.
 - iii. The log books and the research report would be checked on the fulfillment of training requirements.
 - iv. Candidates would be asked on questions regarding their log books and other questions related to the syllabus.
 - v. If the candidate failed to pass the Exit Assessment, the Exit Assessment Panel would make recommendations on the subsequent action for consideration by the MFM Subspecialty Board and the Subspecialty Committee.

8. Admission of Maternal and Fetal Medicine subspecialist

- 8.1 A trainee who has completed the training requirements and assessment of the Board satisfactorily may apply to be a MFM subspecialist.
- 8.2 Cert HKCOG (Maternal and Fetal Med) will be granted by the College to the subspecialist and his or her name will be listed on the 'List of Subspecialists' in the College's Website.

F. PROFESSIONAL DEVELOPMENT IN MATERNAL AND FETAL MEDICINE

1. The Continuing Medical Education (CME)/ Continuing Professional Development (CPD) cycle is 3 years.

2. CME/ CPD activities related to MFM:
 - a. Research
 - b. Teaching
 - c. Attending conferences related to MFM
3. A minimum of 90 CME/ CPD points (at least 60 points on MFM) is required in a 3-year audit cycle. The method of calculating CME/ CPD points is similar to the current CME/ CPD system for general O&G.
4. Those who get accredited or reinstated in the middle of the CME cycle, they need to obtain at least 40 and 20 subspecialty related CME points within the remaining 2 years and 1 year if their accredited subspecialist status is obtained in the first and second year of the CME cycle respectively to satisfy the reaccreditation criteria. The date of counting would be stated on the letter of notification of awarding accredited subspecialist status.
5. The College reserves the right to accept or reject the subspecialty CME/ CPD points claimed.

G. RE-CERTIFICATION OF MATERNAL AND FETAL MEDICINE SUBSPECIALISTS

1. A MFM subspecialist needs to be re-certified every 3 years.
2. A MFM subspecialist who satisfies the continuous professional development requirement in MFM may apply to the Board for re-certification.
3. Failure to get re-accredited as a subspecialist:
The following will be applied if a subspecialist fails to get re-accredited:
 - i) his / her subspecialist status would be suspended and his or her name would be removed from the subspecialist register of HKCOG, AND
 - ii) HKCOG would remove his or her name from the list of subspecialists from our website, AND
 - iii) he / she cannot cite his / her subspecialty qualification [Cert HKCOG (Maternal and Fetal Med)] until he / she has successfully re-instated, AND
 - iv) he / she would bear the liability if he / she continue to cite the subspecialty qualification against HKCOG's instruction

H. RE-INSTATEMENT OF MATERNAL AND FETAL MEDICINE SUBSPECIALISTS

1. A MFM subspecialist who has failed to get re-certified could apply to the MFM Board for reinstatement. This can be done by submitting an application form and an application fee of HK\$5,000.
2. Criteria for reinstatement
 - a. Remain as a registered doctor in The Medical Council of Hong Kong
 - b. Obtained 90 CME points within 36 months counting back from the date of application for reinstatement with not less than 60 CME points that are related to MFM