The Hong Kong College of Obstetricians and Gynaecologists

Maternal and Fetal Medicine Subspecialty
Training and Development
A. TERMS OF REFERENCE OF MATERNAL AND FETAL MEDICINE SUBSPECIALTY BOARD

1. The Board is

a. to uphold and improve the standard of Maternal and Fetal Medicine service in Hong Kong

b. to improve knowledge, practice, teaching and research in the field of Maternal and Fetal Medicine

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 Maternal and Fetal Medicine 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 Maternal and Fetal Medicine

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 Maternal and Fetal Medicine subspecialists
2. The 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 Maternal and Fetal Medicine

c. to liaise with the Manpower Committee/Working Group/Task Force on the training of Maternal and Fetal Medicine subspecialists

d. to be composed of 5 to 9 members with a majority being Maternal and Fetal Medicine 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 Maternal and Fetal Medicine 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

Maternal and Fetal Medicine 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.

2. Knowledge and skills

The training of a Maternal and Fetal Medicine subspecialist should include the following:

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. Requirements for a Maternal and Fetal Medicine training centre

A Maternal and Fetal Medicine training centre must:

a) provide an integrated service for the referral and transfer of high risk obstetric patients, in close collaboration with other obstetricians and disciplines within and outwith the centre, and including a full range of fetal monitoring and assessment techniques

b) have an adequate clinical workload with a full range of high risk maternal and fetal problems with at least 3000 deliveries per year

c) be a specialist referral centre for the specialized prenatal diagnosis of fetal anomalies, of which there should be at least 40 diagnosed cases per year, with the ultrasound facilities and expertise for the detection of the majority of structural malformations in the fetus

d) have a close working relationship with a medical genetics centre and clinical genetics consultants and supporting staff

e) have an in-house neonatal intensive care unit with consultant neonatologists and supporting staff, and an association with a neonatal surgical unit

f) have a 24-hour obstetric anaesthetic service with consultant anaesthetists and supporting staff

g) have close collaboration with consultant physicians and supporting staff with special interest or training in the management of medical disorders in pregnancy

h) have an in-house adult intensive care unit with a full range of diagnostic and support facilities, which must be readily available to the obstetric unit

i) have a perinatal pathology service with at least one consultant pathologist having a major commitment in this field

j) have a research programme related to the subspecialty

k) have regular quality assurance activities related to the subspecialty

l) have adequate library, laboratory 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

m) 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
2. Standards for the accreditation of Maternal and Fetal Medicine training centres

A Maternal and Fetal Medicine training center should satisfy the following criteria to be formally recognized and approved for the purpose of training:

2.1 Workload

a) An annual minimum of:
   - 3000 deliveries
   - 40 fetal abnormalities
   - 200 high risk pregnancies / maternal disorders

2.2 Trainers and Programme Director

a) A trainer must be a Fellow of HKAM(O&G) and a HKCOG accredited Maternal and Fetal Medicine 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-specialty experience in Maternal and Fetal Medicine (with the exception of First Fellow in Maternal and Fetal Medicine) 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.

2.3 Facilities

Each centre should have:
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) Adequate supportive resources including a medical library, internet access and statistic tools

f) A good medical records system

2.4 **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 quality assurance activities

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

2.5 **Support from other medical disciplines**
A training centre should have close collaboration with the following disciplines with adequate support at specialist level:

a) Intensive neonatal unit able to treat major neonatal complications

b) Neonatal surgical team able to perform surgical treatments for major malformations

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

3. 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.

4. Inspection of 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 TRAINEE

1. **Eligibility**

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

2. **Applications**

2.1 The training centre will advertise for prospective trainees to apply for a training position in the Maternal and Fetal Medicine Training Programme which leads to certification as a subspecialist in Maternal and Fetal Medicine.

2.2 Prospective trainees will apply to the training centre for the post.

2.3 Applicants will be asked to forward a curriculum vitae and the names of two referees.

2.4 The training centre will organize the selection exercise.

2.5 Applicants will be assessed against the following selection criteria:
   i) Previous experience in the field of Maternal and Fetal Medicine
   ii) Previous experience in advanced Maternal and Fetal Medicine techniques
   iii) Previous CME activities related to Maternal and Fetal Medicine
   iv) Experience in quality assurance activities
   v) Research experience
   vi) Teaching experience
   vii) Referee reports

2.6 The result of the selection exercise will be submitted to the Maternal and Fetal Medicine Board for approval before commencement of training.
3. **Registration**

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

4. **Prospective approval to continue training**

4.1 Every year, application to continue Maternal and Fetal Medicine Training has to be approved by the Maternal and Fetal Medicine Subspecialty Board before training can proceed.

4.2 Approval for continuation of training should be based on satisfactory logging of experience and the trainers’ recommendation.

5. **Logging of experience**

5.1 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.

5.2 The minimum amount of work expected for each trainee on average per year over the period of training includes:

- a) 200 cases with maternal/fetal/perinatal disorders/complications
- b) 30 complicated obstetric operative procedures
- c) Ultrasound scanning of the following categories:
  - i) Level III scanning for 50 cases of fetal structural abnormalities including fetoechocardiogram
6. **Programme of training**

6.1 Two years of clinical training in Maternal and Fetal Medicine, plus
One year of research related to Maternal and Fetal Medicine
(this research year may be exempted if the trainee has already undergone a
research programme which results in a MD or PhD thesis, or has published
two first author papers in citable refereed journals relevant to the
subspecialty of Maternal and Fetal Medicine)

OR

Three years of combined clinical and research training in Maternal and
Fetal Medicine

6.2 The trainees should have full time involvement in the subspecialty during
normal working hours throughout their training years.

6.3 The research component should be planned at the beginning of the
programme and appropriately timetabled and monitored.

6.4 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.
7. **Trainee to trainer ratio**

A trainee to trainer ratio of not more than 2:1 within each centre.

8. **Assessment**

8.1 The logbook should be reviewed and signed by trainer(s) every 6 months and submitted to the Subspecialty Board for review annually. There would be feedback from the Board to the trainee annually regarding the adequacy of training as reflected in the logbook.

8.2 Evidence of research is mandatory, with one paper being published or accepted for publication by a peer-reviewed academic journal, by the time of exit assessment. Case reports and reviews would not normally be considered.

8.3 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. The exit assessment should be held within 3 months of completion of training.

8.4 The exit assessment should include the following:

   a) There would be 2 Maternal and Fetal Medicine 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.

   b) The duration of the exit assessment would be at least 30 minutes.

   c) The log books and the research report would be checked on the fulfillment of training requirements.

   d) Candidates would be asked on questions regarding their log books and other questions related to the syllabus.

   e) If the candidate failed to pass the Exit Assessment, the Exit
Assessment Panel would make recommendations on the subsequent action for consideration by the Maternal and Fetal Medicine Subspecialty Board and the Subspecialty Committee.

9. **Admission of Maternal and Fetal Medicine subspecialist**

A trainee who has completed the training requirements and assessment of the Board satisfactorily may apply to be a Maternal and Fetal Medicine subspecialist.
E. 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 Maternal and Fetal Medicine -
   a. Research
   b. Teaching
   c. Attending conferences related to Maternal and Fetal Medicine
   d. A minimum of 90 CME/ CPD points (at least 60 points on Maternal and Fetal Medicine) 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. The College reserves the right to accept or reject the subspecialty CME/ CPD points claimed.

3. Audit activities -
   a. A statistical summary (representative month’s work schedule / sessions) related to Maternal and Fetal Medicine of the patients managed over the past 3 years.
   b. Logging of cases and procedures related to Maternal and Fetal Medicine in 6 continuous months within the 3 years of audit. Related cases or procedures include but not limited to the following:
      i. High-risk obstetric cases
      ii. Complicated deliveries
      iii. Fetal ultrasound examinations
      iv. Invasive prenatal diagnosis procedures

The candidate must have significant involvement in the management of these cases. If two or more Maternal and Fetal Medicine subspecialists are involved in the management of the same case, only one Maternal and Fetal Medicine subspecialist can log the case for the audit purpose. However, if the case is managed by a subspecialty trainee supervised by a trainer, both can log the case.

c. A minimum of 50 cases listed in 3 (b) is expected to be performed or managed by a MFM subspecialist. Of these 50, no more than 40% should be of the same category/ type of procedure.
F. RE-CERTIFICATION OF MATERNAL AND FETAL MEDICINE SUBSPECIALISTS

1. A Maternal and Fetal Medicine subspecialist needs to be re-certified every 6 years.

2. A Maternal and Fetal Medicine subspecialist who satisfies the continuous professional development requirement in Maternal and Fetal Medicine may apply to the Board for re-certification.