RANZCOG
Excellence in Women's Health

RANZCOG | CMFM
Certification in
Maternal Fetal Medicine

Training Program Handbook

Certification in Maternal Fetal Medicine (CMFM)

ranzcog.edu.au

THE ROYAL AUSTRALIAN AND NEW ZEALAND
COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS
ABN 34 100 268 969

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IMPORTANT NOTICE:
INFORMATION AND REGULATIONS IN THIS HANDBOOK

RANZCOG Regulations

Every effort has been made to ensure that the Information and Regulations in this Handbook were correct at the time it was produced. The Regulations are available on the RANZCOG website via the following link:

RANZCOG Regulations

RANZCOG policies relating to training

For all the RANZCOG policies governing the CMFM Subspecialty Training Program refer to the following link:

RANZCOG Policies and Procedures Directory

Updates

A regularly updated version of the Handbook is available on the RANZCOG website, and readers should always consult the website version when checking information or Regulations.

Published by

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists 1 Bowen Crescent, Melbourne, Victoria 3004, Australia

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College Vision, Mission and Values

Vision

Excellence and equity in women's health

Mission

To continue to lead in education and training in obstetrics and gynaecology, and advocacy in women's health

Values

Advocacy

We are a leading voice for equity, social justice, fairness and evidence-based policy

Education

We embrace the opportunity to learn, share knowledge and experience through innovation, discovery and research

Excellence

We are committed to performance at the highest standard in our work, training, research and support.

Integrity

We act honestly, ethically and with accountability towards everyone and in everything we do

Kindness

We act with compassion and care towards ourselves and one another.

Respect

We expect and promote inclusivity, valuing individual rights, beliefs and choices

College Information

Staff Contact Details

CMFM Subspecialty Training Program Coordinator

Phone: +61 3 9114 3942

Email: cmfm@ranzcog.edu.au

Examinations Department

Email: assessment@ranzcog.edu.au

Training and Support Unit

Email: traineeliaison@ranzcog.edu.au
Phone: +61 8 6102 2096
Website: RANZCOG Member Wellbeing and Support

College Training and Education Committees

Standing Committees of the Board have been established to formulate and review training and assessment requirements leading towards the attainment of Subspecialty certification. Board Committees usually meet in March, July and November.

Certification in Maternal Fetal Medicine (CMFM) Subspecialty Committee

Chair: Dr Alison Fung

The CMFM Subspecialty Committee is responsible for overseeing the formulation and review of training, accreditation and assessment policies leading towards the attainment of Maternal and Fetal Subspecialty Certification of the College. It reports to the RANZCOG Board via the Subspecialties Committee and Education Standards Committee (ESC). Recommendations on assessment matters are referred to the RANZCOG Board through the Subspecialties Committee and the Examinations and Assessment Committee; recommendations on training and accreditation matters are referred to the RANZCOG Board through the ESC and Subspecialties Committee. Recommendations concerning Specialist International Medical Graduates (SIMG) assessments for RANZCOG subspecialty recognition are referred by the Committee through the Subspecialties Committee, ESC and SIMG Committee to the RANZCOG Board for consideration.

All correspondence pertaining to the work of these Committees should be forwarded to the Chair of the relevant Subspecialty Committee at the address below:

RANZCOG
1 Bowen Crescent
MELBOURNE VIC 3004
Email: cmfm@ranzcog.edu.au

Subspecialties Committee

Chair: Dr John Regan

The Subspecialties Committee, through its five (5) subcommittees, is responsible for overseeing the formulation and review of the training, assessment and accreditation policies leading towards the attainment of Subspecialty certification of the College.

Recommendations on assessment matters are referred to the RANZCOG Board in conjunction with the Education & Assessment Committee.

Recommendations on training and accreditation matters are referred directly to the RANZCOG Board.

The Committee is responsible for the assessment of Specialist International Medical Graduates (SIMGs) for RANZCOG subspecialist recognition and reports directly to the RANZCOG Board on this matter.

Such training, assessment and accreditation matters include, but are not limited to:

- overseeing the process of ongoing development, coordination and maintenance of the College's Subspecialty Training Programs, the assessment of the trainees enrolled in those programs and approval of Training Supervisors
- making recommendations to the RANZCOG Board, in conjunction with the College Education and Assessment Committee, on matters relating to the College assessment process, including the Research Project, Written and Oral Examinations and the In-Hospital Clinical Examinations
- overseeing the process of selection of Subspecialty trainees
- making recommendations to the RANZCOG Board of new training posts and the re-accreditation of existing training posts

- reporting to and liaising with the Training Accreditation Committee on matters pertaining to Subspecialty training
- making recommendations to the Continuing Professional Development Committee on matters pertaining to recertification
- overseeing the process of assessment of International Subspecialists applying for Subspecialty recognition in Australia and New Zealand

Education & Assessment Committee (EAC)

Chair: Dr Michael Rasmussen

The EAC is responsible for ensuring, maintaining and enhancing the integrity, validity and reliability of the individual and collective education and assessment components and associated processes pertaining to Training Programs run and administered by the College.

Such assessment components include, but are not limited to:

- Certificate in Women's Health (CWH), DRANZCOG, FRANZCOG and Subspecialty Written Examinations
- DRANZCOG Advanced, FRANZCOG and Subspecialty Oral Examinations
- In-Hospital Clinical Assessments (IHCAs) and In-Hospital Clinical Examinations (IHCEs)
- Research component of the FRANZCOG Curriculum and Subspecialty programs
- Trainee competence in defined O&G surgical procedures

Education Standards Committee (ESC)

Chair: A/Professor Gregory Jenkins

The ESC oversees the ongoing development and implementation of educational standards across all RANZCOG education, training, assessment and accreditation. The Committee is responsible for the College's Training Programs, including regular monitoring and evaluation and is delegated by the Board to make decisions relating to its area of responsibility.

The responsibilities of ESC include the following:

- Oversight of all education, training, assessment and accreditation of RANZCOG programs to ensure contemporary and high quality delivery;
- consideration of ongoing developments in specialist medical education and training, ongoing monitoring of assessment processes and developments in training modalities, including simulation and other initiatives and consideration of possible application to College education and Training Programs;
- formulation of recommendations and development of discussion papers regarding strategic initiatives in line with the College's strategic objectives;
- development, implementation, monitoring, and evaluation of the currency, reliability and validity of all components of the RANZCOG Training and Assessment processes;
- reviewing and responding to contemporary practices and AMC and MCNZ Standards for Specialist Medical Training in consultation with key stakeholders as appropriate;
- establishing Recognition of Prior Learning (RPL) panel from its members to assess, review and recommend assessment criteria for applicants who are prospectively approved to commence the FRANZCOG Training Program and see to obtain recognition of relevant training, which predates the commencement of their FRANZCOG training; and
- establishing prevocational pathway panels as required to review requirements for prevocational trainees (as set by AMC/MCNZ), oversee quality assurance and continuous improvement of the

RANZCOG PVP (including update of educational content), and ensure completion of the PVP is aligned to FRANZCOG selection requirements.

Bullying, Harassment and Discrimination in the Workplace Policy

This policy relates to the behaviour of members, Fellows, and trainees of the College in roles pertaining to RANZCOG training, including supervision, oversight, reporting and assessment.

The purpose of this policy is to protect RANZCOG trainees, members and Fellows against bullying, harassment and discrimination in the workplace. The workplace includes training sites in public and private hospitals, private practice settings and the College environs.

The College is committed to ensuring fair and equitable workplace practices and does not tolerate bullying, harassment or unlawful discrimination in any workplace. Discrimination, bullying and harassment are prohibited by law and workplace participants who engage in such conduct may be held personally liable for their actions. This includes threatening behaviour, intimidation, exclusion or physical violence.

The full *Bullying, Harassment and Discrimination in the Workplace Policy* is available on the RANZCOG website via the following link:

RANZCOG Policies and Procedures Directory

Trainee Support

Training Support Unit (TSU)

RANZCOG is committed to supporting trainees and therefore has established the TSU. This is a safe, professional and impartial service for trainees to contact should guidance and support, be required.

The Trainee Liaison has a background in mental health, counselling and public health services. The TSU encourages trainees, consultants and Training Supervisors to reach out at times of difficulty. The TSU can also assist with the following:

- processes for management of complaints
- development of resources
- referral to appropriate internal and external support resources and services
- identification of a range of potential intervention strategies

Trainees are encouraged to contact Trainee Liaison Senior Coordinator in times of personal or professional stress, anxiety or poor health.

Senior Coordinator, Trainee Liaison
Email: traineeliaison@ranzcog.edu.au
Phone: +61 8 6102 2096
Website: RANZCOG Member Wellbeing and Support

Converge International

To further support Trainees the TSU has established a partnership with Converge International. (Vitae is the NZ equivalent).

Converge International is a confidential support service that is open to our Trainees, 24/7/365. This service can be utilised for any personal or work-related matter.

- support is confidential and private
- EAP Counselling, Family Assist and Crisis Telephone Counselling Sessions (these are funded by RANZCOG)
- support that can be tailored to meet our Trainees needs (face-to-face, telephone or online)
- services are available across Australia and New Zealand (Vitae – NZ equivalent)

For more information please contact: Converge International on:

Phone: 1300 687 327 (Australia)
Phone: +64 0800 666 367 (New Zealand)
Phone: +61 386 205 300 (International)
Website: Converge International

RANZCOG Exceptional Circumstances and Special Consideration

This policy outlines the criteria and processes by which those individuals subject to RANZCOG regulations and/or policies pertaining to a range of requirements, including those associated with training and assessment, may apply for variation to the normal requirements on the grounds of exceptional circumstances that may justify special consideration.

As such, the application of this policy includes the following groups:

- Applicants for a position on a RANZCOG Training Program
- Trainees undertaking the core training or advanced training components of the FRANZCOG Training Program
- Trainees undertaking a RANZCOG Subspecialty Training Program
- Trainees undertaking the Certificate of Women's Health, DRANZCOG or the DRANZCOG Advanced
- Specialist International Medical Graduates (SIMG) being assessed for comparability to a RANZCOG trained specialist in obstetrics and gynaecology or suitability for an area of need position, or undertaking training / assessment / supervision requirements as part of a pathway to obtain RANZCOG Fellowship
- SIMG being assessed for comparability to a RANZCOG trained Subspecialist or undertaking training / assessment requirements as part of a pathway to obtain certification by RANZCOG as a Subspecialist
- Fellows and other College members required to undertake a Continuing Professional Development (CPD) program

Exceptional Circumstances and Special Consideration Policy is available on the RANZCOG website via the following link:
Exceptional Circumstances and Special Consideration Policy

This policy should be read in conjunction with the RANZCOG reconsideration review and appeals procedures, and the processes described therein. This is available on the RANZCOG website via the following link:
Reconsideration, Review and Appeal of Decisions Policy

Training Administration

Components of the CMFM Subspecialty Training Program

The CMFM Subspecialty Training Program consists of three (3) clinical years, all of which must be prospectively approved. It includes the following elements:

High Risk Obstetrics and Ultrasound

Trainees must complete a period of at least two (2) years of combined high-risk obstetrics and ultrasound. The trainee works in a clinical role in the Maternal Fetal Medicine division of an obstetric unit in a tertiary referral hospital which is responsible for the management of the maternal disorders and pregnancy complications which constitute high risk obstetrics. It is expected that the trainee will receive instruction in and acquire the cognitive and technical skills for the full breadth of diagnostic and therapeutic procedures constituting Maternal Fetal Medicine.

Developing an understanding of the practice of Maternal Fetal Medicine in an Australian environment is an important part of this program. It is for this reason that it is unlikely that the trainee will be able to have overseas experience recognised for this component of the Training Program.

Trainees must also acquire special competence in diagnostic ultrasound where it relates to pregnancy. This training will include both diagnostic imaging and ultrasound guided interventional procedures. This time should provide the trainee with the opportunity to concentrate on the application of ultrasound to the study of pregnancy and is in addition to the time that may have been spent during the trainee's earlier years in mainstream obstetrics and gynaecology. Trainees will receive additional ultrasound experience in clinical Maternal Fetal Medicine in both the procedural and diagnostic areas.

Trainees will be required to maintain a record of ultrasound procedures during their entire training period. As well, trainees must pass Part I of the Diploma of Diagnostic Ultrasound (DDU) qualification of the Australasian Society of Ultrasound in Medicine (ASUM) and the RANZCOG Hybrid In-Hospital Clinical Examination (IHCE). It is acknowledged that the Subspecialties of Obstetrical and Gynaecological Ultrasound and Maternal Fetal Medicine share common ground in the area of pregnancy.

Minimum Procedures – Ultrasound and Prenatal Diagnosis

Certification as a CMFM Subspecialist requires a minimum number of procedures to be personally performed over the three (3)-year clinical training period as follows:

- 2,000 Ultrasound scans
- 100 Amniocenteses procedures
- 50 CVS procedures

Neonatology Experience

Trainees are required to spend a minimum of one hundred (100) hours at neonatology ward rounds over the three (3)-year training program. At least half of this time (50 hours) should be spent on business or working ward rounds of the neonatology unit, where management of all the patients in the nursery is planned. At least half of this time in neonatal teaching rounds should be away from the cot side in teaching and education rather than management.

Trainees intending to complete the three (3)-months full-time neonatology experience, must have gained this experience within five (5) years of commencing CMFM Subspecialty training. Trainees intending to complete the neonatology requirement in a part time capacity will be expected to complete a program of equivalent experience to the satisfaction of the CMFM Subspecialty Committee.

Perinatal Genetic Clinics

Trainees are required to attend twelve (12) perinatal genetics clinics during the Training Program.

Counselling for the full range of disorders relevant to the field of prenatal diagnosis should take place at these clinics (normally occupying a half day each). A record of this experience will be required in the Training Assessment Record (TAR).

Clinical Pathology Meetings& Perinatal Autopsy

Trainees are required to attend at least twelve (12) clinical pathology meetings and one (1) full perinatal autopsy and acquire special knowledge of the correlative aspects of clinical disease and perinatal pathology. A record of this experience will be required in the Training Assessment Record (TAR).

A Year-By-Year Guide for Trainees

<table>
<tr><th></th><th>Year 1 (46 weeks)</th><th>Year 2 (92 weeks)</th><th>Year 3 (138 weeks)</th><th>Post-Year 3</th></tr>
<tr><td>Prospective Approval</td><td colspan="3">Statement of Understanding (SoU),
Registration (Form A) &
Prospective Approval (Form B)
Submit annually (each calendar year) eight weeks prior to commencement of each training year</td><td>Statement of Understanding (SoU)
Registration (Form A)
Submit annually prior to 31 January</td></tr>
<tr><td rowspan="3">Clinical Training Program Requirements</td><td colspan="3">High Risk Obstetrics and Ultrasound - (92 weeks minimum)
Neonatology Experience 100 hours attendance at neonatal ward rounds
Genetics Clinics Attend twelve (12) perinatal genetics clinics
Perinatal Pathology
Attend at least twelve (12) clinical pathology meetings and one (1) full perinatal autopsy.
Minimum Procedures
Personally perform 2,000 scans, 100 amniocenteses, and 50 CVS procedures</td><td rowspan="6">Post Year 3
Progress Report
(Replaces TAR)
Submit 6 monthly report until completion of training components</td></tr>
<tr><td colspan="3">Biostatistics and Research Methods Course
Prospective Approval must be submitted to attend an assessable course offered by a tertiary institution. This course should consist of three (3) hours of instruction/week for one semester.</td></tr>
<tr><td colspan="2"></td><td>Special Interest Training (SIT)
One year spent in area of special interest</td></tr>
<tr><td rowspan="2">Clinical Training Program Assessments</td><td colspan="3">Formative Appraisal Report (FAR) 1 per semester
submitted within four (4) weeks of the end of each relevant three-month period</td></tr>
<tr><td colspan="3">Training Assessment Record (TAR) 1 per semester
Submit within six (6) weeks of the end of each relevant six (6) -month period the following:
Summative Consultant Assessment Reports
Clinical Training Summary (CTS) - two Clinical Training Summaries (one for the period covering the current training period and one cumulative from the commencement of training).
Assessment of Procedural Skills (APS) Summary Sheet – CVS & Amnio
Scholarly Elective Research or Non-Research Stream Progress Report
Online Trainee Feedback Survey</td></tr>
<tr><td rowspan="2">Examinations</td><td>DDU (Part 1)
Must be completed before applying to sit the In-Hospital Clinical Exam (IHCE)</td><td colspan="2">Hybrid In Hospital Clinical Examination (IHCE)
Trainees may apply to sit after completing the DDU Part 1 & after forty-six (46) weeks FTE satisfactory training
Passing the IHCE must be prior to completing the three (3) years of clinical training.</td></tr>
<tr><td colspan="3">Written and Oral Examinations
First(1st) attempt after forty-six (46) weeks FTE satisfactory training.</td></tr>
<tr><td rowspan="2">Scholarly Elective: Research Stream and Non-Research Stream</td><td>Prospective Approval Proposal & Timeline (to be Included with TAR 1.1)

Research Stream Proposal
Non-Research Stream Application for Course</td><td colspan="3">Trainee Submission Timeframes - Research Stream Option
For trainees who commenced CMFM Subspecialty training prior to 1 December 2018, the Research Stream must be submitted for assessment within two years of completion of clinical training, and satisfactorily assessed within three (3) years of completion of the clinical component of CMFM Subspecialty Training Program.
For trainees who commenced Subspecialty training from 1 December 2018 the Research Stream must be submitted for assessment within one year of completion of clinical training and satisfactorily assessed within three (3) years of completion of clinical component of CMFM Subspecialty Training Program.</td></tr>
<tr><td>Prospective Approval Final Approval Proposal & Timeline (to be included with TAR 1.2)
Research Stream Final including Ethics Committee approval (if required)
Non-Research Stream Final Approval of Course</td><td colspan="3">Trainee Submission Timeframes Non-Research Stream Option
For trainees who commenced Subspecialty training from 1 December 2018 the Non-Research Stream must be satisfactorily completed prior to the three (3) years of clinical training (138 weeks).
All Non-Research Stream trainees must submit evidence of completion of the prospectively approved course and will be approved by the CMFM Subspecialty Committee Non-Research Advisors team.</td></tr>
</table>

Requirements of the CMFM Subspecialty Training Program

Clinical Training Program Requirements

- Each year of clinical training (Years 1 – 3) must be prospectively approved
- Year 1 of clinical training must be spent in a prospectively approved RANZCOG Accredited CMFM Subspecialty Training Unit in Australia or New Zealand and may be completed either as part-time (minimum 0.5FTE) or full-time training
- Subsequent years may be completed either full-time or part-time, with a maximum of two (2) years extended leave
- Special Interest Training (SIT) – Year 3 only must be prospectively approved
- Must be undertaken in a minimum of two (2) Accredited CMFM Training Units during the three (3)-year Training Program, unless otherwise prospectively approved by the CMFM Subspecialty Committee. The minimum time in one (1) unit will be the equivalent of six (6) months' full-time training
- Clinical training must be completed in five (5) years (excluding extended leave)
- Trainees must spend a minimum of 20% (1.0FTE) or 10% (0.5FTE) of clinical training time within the Scholarly Elective

Clinical Training Program Assessments

- Desirable that part of the clinical Training Program is in a prospectively approved unit outside Australia or New Zealand
- Trainees are required to complete and submit the following documents as part of their CMFM Subspecialty training:
    - Prospective Approval (PA): Annually
    - Formative Appraisal Report (FAR): mid semester
    - Training Assessment Record (TAR): six (6)-monthly
    - Post-Year 3 Training Progress Report: six (6) -monthly

Prior to completing the three-year training program trainees must complete the following:

- 12 perinatal genetics clinics
- 12 clinical pathology meetings and 1 full perinatal autopsy
- 100 hours attendance at neonatology ward rounds
- 2,000 ultrasound scans, 100 amniocenteses and 50 CVS procedures
- Biostatistics course prospectively approved at a tertiary institution
- Assessment of Procedural Skills (APS) in Amnio & CVS
- DDU Part 1
- In-Hospital Clinical Exam (IHCE)

Special Interest Training (SIT) - Year 3

Only Year 3 of clinical training would be prospectively approved for SIT, provided trainees have new experiences and exposure, with both a new training unit and a new Training Supervisor. Should the SIT be available in an unaccredited training unit, trainees must ensure a MFM Subspecialist working in the unit is willing and available to act as their Training Supervisor.

The purpose of a Special Interest Training (SIT) is for Year 3 trainees to supplement what has been learned within the first two (2) years of the CMFM Subspecialty Training Program. The acceptable scope of training options must be wide in variety and cannot be comprised of only training requirements. Examples of this would be maternal medicine, fetal cardiology, genetics or complex fetal surgery.

The Chair of the CMFM Subspecialty Committee must prospectively approve this Year 3 of training. Within the Prospective Approval application, the training timetable and training plan must demonstrate the breadth of experience that will be gained during this year.

Eligibility to Commence Training in the CMFM Subspecialty Training Program

Following the Subspecialty Selection process, and after being deemed eligible for CMFM training, to become a CMFM trainee, doctors must:

- Have the FRANZCOG or have the following:
  - For those trainees who commenced the FRANZCOG Training Program during the period 1 December 2003 to 30 November 2013 they must have successfully completed all requirements of core training in the FRANZCOG Training Program as well as the FRANZCOG Written and Oral examinations, and advanced surgical skills assessment.
  - For those who commenced the FRANZCOG Training Program on or after 1 December 2013 they must have successfully completed all requirements of core training in the FRANZCOG Training Program, which includes the FRANZCOG Written and Oral examinations, as well as satisfactorily completed the research component of the FRANZCOG Training Program.
- Current Medical Registration with the Medical Board of Australia (MBA) or the Medical Council of New Zealand (MCNZ) as per *Regulation C1.2.2.3*
- An appointment to an accredited CMFM training position
- Submission and approval of the Prospective Approval (PA) Application

Prospective Approval (PA)

Following confirmation of being selected eligible to join the CMFM Subspecialty Training Program, trainees must be prospectively approved for training at least eight (8) weeks prior to the commencement of training. Only training that has been prospectively approved will be credited by RANZCOG.

To be prospectively approved, applicants applying to commence the CMFM Subspecialty Training Program should complete the following:

- Statement of Understanding (SoU);
- Registration Form A (Reg); and
- Prospective Approval Form B (PA)

These forms can be found on the RANZCOG website via the following link:

CMFM Subspecialty Training Documents and Resources

In some circumstances, a trainee who was selected as eligible to join the CMFM Subspecialty Training Program, may be eligible to begin their training in August of the year they were interviewed provided the applicant:

- Is already working in an accredited training unit with an accredited position available for them to commence in August; and
- Has completed eligibility requirements for commencement for CMFM training as per the RANZCOG Regulations, or is a FRANZCOG

In such a case, a SoU, Reg and PA must still be submitted eight (8) weeks prior to the commencement of training. If commencing in August, this Prospective Approval will apply for six (6) months (one (1) semester only).

All CMFM trainees are required to apply for Prospective Approval of training for each calendar year of clinical training. Applications for SoU, Reg and PA must be submitted at least eight (8) weeks prior to commencement of the relevant training period.

Some trainees find that circumstances and opportunities change from their prospectively approved position during the CMFM Subspecialty Training Program. The trainee and the Training Supervisor should communicate this to the CMFM Subspecialty Committee Chair as soon as possible.

Applying for Part Time Training

For trainees in the CMFM Subspecialty Training Program, Years 1 - 3 may be undertaken as part time training.

All part time training must be at least half of the full-time training requirement (0.5FTE) for the relevant training period. The duration of the Training Program will be extended for that trainee. All part time training must include a range of experience appropriate to the trainee's year level and must include appropriate supervision.

Applying for Leave from CMFM Training

Annual Leave and Professional Development Leave (PDL)

The maximum number of weeks able to be credited in any period covered by a six (6)-monthly summative assessment is twenty-six (26) weeks FTE with a maximum of forty- six (46) weeks FTE of training able to be credited for training undertaken in a 'Subspecialty training year'.

A 'Subspecialty training year' consists of two (2) consecutive 'six (6) month training blocks' based around (but not confined to) a calendar year and is determined by the CMFM Subspecialty Committee. This applies irrespective of any government or hospital leave entitlements which may operate in a particular state or region.

In addition to the six (6) weeks leave per year allowed, trainees are permitted up to two (2) weeks (10 days) of study-conference leave per year, which is recognised as part of active clinical services professional development.

With each six (6)-monthly summative assessment, the trainee and their supervisor must sign off on the number of weeks of leave taken during the six (6)-month training period. The nature of the leave must also be indicated.

Extended Leave

Trainees may interrupt their training to take extended leave from the Training Program for a maximum of 104 weeks cumulative, but only 52 weeks' leave can be approved at any one time and includes parental leave taken while on the Training Program.

All extended leave must be prospectively approved by the Chair of the CMFM Subspecialty Committee and as from 1 August 2019 the '*clock will stop*' when a trainee applies for extended leave and will not be included in the aggregate of time requirements in the CMFM Subspecialty Training Program.

The application for extended leave approval must be made with the knowledge and agreement of the Training Supervisor.

Accredited Training Units

Prospective candidates should note that trainees commencing the CMFM Subspecialty Training Program must undertake training in a minimum of two (2) accredited CMFM training units, with different Training Supervisors, during the three (3)-year clinical Training Program. The minimum time in one (1) unit will be the equivalent of six (6) months' full-time training.

The intent of the requirement is to ensure that trainees are exposed to educational and training diversity with a variety of procedures and methods that are obtained with different Training

Supervisors preferably in different geographical locations. If the CMFM Subspecialty Committee considers than the intended second training unit is not substantially different from the first training unit, the application may be declined, and the trainee will require to find another unit either in Australia and New Zealand or overseas.

For further information on Subspecialty accredited training units can be found on the RANZCOG website via the following link:

Subspecialty Accredited Training Units

Training in an Overseas Training Unit

All overseas training must be prospectively approved and assessed by the CMFM Subspecialty Committee. Trainees must provide a plan for completion of training on return to Australia and New Zealand and commitment of support from an Australian or New Zealand Training Supervisor.

As with training in Australia or New Zealand, trainees overseas are required to submit all training documentation within the specified timelines to the CMFM Subspecialty Training Program Coordinator. The guidelines and regulations that govern registration, fees and training documentation also apply to trainees overseas.

In some overseas hospitals, the consultants with whom the trainee works, and the Training Supervisor may not be familiar with the forms and training documentation requirements. Trainees will need to provide consultants and their Training Supervisors with the necessary documentation and explain how it is used.

Training Documentation

Years 1 – 3 Clinical Training

Logbook

Trainees are required to keep a logbook of their daily training for each year of clinical training. The contents of the logbook must be reviewed by the Training Supervisor. The trainee logbook must record:

- Clinical experience
- Attendance at meetings
- Attendance at outpatient clinics
- Research activities

This record of experience has several functions:

- It provides trainees with a personal record of clinical experience, which can be used to plan further training with the trainee, Training Supervisor or other mentors
- It provides trainees with the information required to complete the six (6)-monthly summary of training experiences which trainees are obliged to submit
- These six (6)-monthly summaries are used by the Training Supervisors, Program Director and the CMFM Subspecialty Committee Chair to monitor the trainee's experience and ensure that it is appropriate for the trainee's year of clinical training
- They are used by the College to monitor the experience provided for the trainee by the hospital units
- It makes up a component of the formal proof of training, which trainees are obliged to provide to the College when requested
- The Chair of the CMFM Subspecialty Committee, or Training Supervisor, or Program Director may view the logbook for verification or clarification of details in the training period

Formative Appraisal Report (FAR)

The three (3)-monthly Formative Appraisal Report (FAR) is a compulsory assessment of a trainee's knowledge, skills and attributes. Trainees must complete a self-assessment of their strengths and challenges before meeting with their Training Supervisor to discuss their performance during the relevant training period.

The FAR must be completed and submitted within four (4) weeks of the end of each relevant three (3)-month period.

Training Assessment Record (TAR) (including six (6)-monthly consultant summative assessment report)

The six (6)-monthly Training Assessment Record (TAR) includes the consultant summative assessment report, is designed to provide the CMFM Subspecialty Committee Chair, Training Supervisor, and RANZCOG with a presentation of all training and assessment achievements. It also enables trainees to record progress made in other components of the CMFM Subspecialty Training Program, such as attendance at courses, meetings and clinics.

The TAR must be completed and submitted within six (6) weeks of the end of each relevant six (6)-month period.

Every Six Months, Trainees Must:

- Ensure the logbook is up to date
- If the training period altered significantly from the prospectively approved timetable (during the six (6) months), trainees must provide details of the changes indicating the altered training experiences
- Complete the trainee section of the Scholarly Elective: Research Stream (Research Project) or Non-Research Stream Progress Report and have the Training Supervisor complete the Training Supervisor section of the report
- Complete the components of the CMFM Subspecialty Training Program record
- Complete trainee participation in other professional activities record
- All RANZCOG CMFM trainees are required to provide a confidential evaluation of their training unit, via an online Trainee Feedback Survey. The aim is to identify strengths and weaknesses within training units that, where appropriate, improvements in a training unit may be encouraged. The CMFM Subspecialty Committee Chair (or nominee) will contact the trainee to discuss any identified weaknesses and the best approach to improve the situation
- Trainees must complete, review and sign their TAR with their Training Supervisor

Every Six Months, Training Supervisors Must:

- Distribute online consultant assessment reports to each consultant with whom the trainee has worked before the six (6)-monthly summative assessment meeting with the trainee
- This report is used for the following purposes:
  - It provides the Training Supervisor with feedback on the trainee's performance from the consultants with whom the trainee has worked and it provides RANZCOG with feedback on the trainee's progress
  - Where a trainee receives 'below expectation in two (2) or more competencies by two (2) or more consultants, the Training Supervisor must tick the box 'referred for review to the CMFM Subspecialty Committee' on these six (6)-monthly reports and a Learning Development Plan (LDP) must be submitted with the report
- The Training Supervisor must complete, review and sign the TAR with their Trainee

Submitting Training Documentation and Deadlines

Key submission dates are available on the RANZCOG website via the following link:

Key submission dates

Trainees who do not receive satisfactory six (6)-monthly summative assessment reports must submit a Learning Development Plan (LDP) and may be referred and discussed by the CMFM Subspecialty Committee. A recommendation may be made, through the Subspecialties Committee that no credit is given for the period in question. This will extend the training time for the trainee.

Trainees who do not submit the formative appraisal report within four (4) weeks of the end of the relevant training period, or the six (6)-monthly summative assessment within six (6) weeks of the end of the relevant training period, the relevant training period will be assessed as 'Not Satisfactory' and will not be credited.

At this time the trainee will receive a letter from the CMFM Subspecialty Committee Chair advising this fact and further advising that if there is a second occasion when the three (3)- monthly formative appraisal report or the six (6)-monthly summative assessment are not submitted within the stipulated timeframe, they will be recommended for removal from the program. No further warnings will be provided.

Biostatistics and Research Methods Course

Trainees are required to submit a Biostatistics Course Prospective Approval form, detailing the course proposed prior to commencing the course. An acceptable course will cover epidemiology and biostatistics and involve instruction for at least three (3) hours a week for one (1) semester.

Trainees will be expected to provide evidence of having taken, and successfully completed, an approved assessable course in biostatistics offered by a tertiary institution.

Assessment of Procedural Skills (APS)

The Assessment of Procedural Skills (APS) is a fundamental component of Maternal Fetal Medicine.

Assessment of a trainee's competence in key procedures is undertaken by way of Assessment of Procedural Skills (APS).

This compulsory assessment process applies to all trainees in the CMFM Subspecialty Training Program and represents an important component of progression to Certification in the Subspecialty.

Procedures to be Assessed

The process involves the assessment for competency of trainees in the following two (2) procedures:

- CVS
- Amniocentesis

Assessment Process

Any time an assessment of a trainee for any of the procedures is conducted, there are two (2) possible outcomes:

1. That the trainee is assessed as "Competent to perform the procedure independently".
2. That the trainee is assessed as "Not competent to perform the procedure independently".

'Competent' implies the ability of the trainee to safely complete the procedure in a timely manner, without instruction or intervention from others.

Repeated failed assessments will be noted as part of the trainee's formative and summative assessment processes through their three (3)-monthly and six (6)-monthly training reports. This circumstance will require a learning development plan to be put in place by the Training Supervisor and may involve the trainee being directed to undertake specific surgical training in order to progress further in the Training Program.

Who can Perform the Assessment?

The assessment of each procedure is to be performed by a certified RANZCOG Maternal Fetal Medicine Subspecialist. At the discretion of the trainee and their Training Supervisor, the assessment may be performed by the trainees' usual consultant, Training Supervisor, head of unit or an external assessor. If the involvement of the assessing subspecialist is anything more than that of a routine non-specialist assistant, re-assessment at another time will be required.

When are Assessment Forms Submitted?

Individual formative assessment forms for each of the particular procedures assessed are retained by trainees and made available upon request by the Chair of the CMFM Subspecialty Committee, the trainee's Training Supervisor, or the subspecialties department.

The APS Summative Assessment form(s) are submitted with the TAR in Years 1, 2 and 3.

Diploma of Diagnostic Ultrasound (DDU) Part 1

Trainees must complete the DDU Part 1 before attempting the In-Hospital Clinical Examination (IHCE). Trainees must contact the Australasian Society for Ultrasound in Medicine (ASUM) regarding information and applications for the DDU Part 1. ASUM will provide DDU Part 1 candidates with a letter stating the result of their examination which must be forwarded to the CMFM Subspecialty Training Program Coordinator.

Hybrid In-Hospital Clinical Examination (IHCE)

The Hybrid In-Hospital Clinical Examination (IHCE) is specifically for assessing a trainee's scanning technique and aims to be undertaken at the trainee's training site with equipment familiar to the trainee. The IHCE must be successfully passed prior to completing three (3) years of clinical training (138 weeks).

Eligibility

CMFM trainees may undertake the required IHCE after completion of 46 weeks FTE of prospectively approved and satisfactory CMFM Subspecialty training.

Applications

To apply for the Hybrid In-Hospital Clinical Exam (IHCE), trainees must complete and submit the online application and payment form. Evidence of satisfactory completion of the DDU Part 1 (e.g. the letter ASUM provides candidates stating the result of their examination) must be attached to the application and payment form.

The Hybrid IHCE application form requests dates that both the trainee and training supervisor's availability. This date range will be taken into consideration for preparing examiners.

Format

The standard rating forms (assessments) have been revised and will take effect from February 2023. It is recommended that these are reviewed prior to applying so as trainees are familiar with the revised assessments.

The examiners will rate the candidate's performance in a number of defined skill areas. The candidate is encouraged to explain what they are doing during the examination. After each patient, the examiners will ask the candidate to demonstrate skills in report writing.

- Two (2) examiners will observe the candidate: the local examiner will examine onsite, and the interstate examiner will examine remotely via video conferencing.
- Trainee must examine three (3) patients in a normally scheduled clinic session over a three (3)-hour period.
- The result for this assessment is pass or fail
- The trainee may repeat the IHCE as many times as necessary but may not be repeated within four (4) weeks of an unsuccessful attempt

For further information visit the RANZCOG website via the following links:

CMFM Training Documents and Resources

Hybrid CMFM IHCE Application and Payment form

Post-Year 3 Training Progress Report

At the completion of clinical training, trainees must nominate a mentor/supervisor who shall provide input into a Progress Report toward the completion of any outstanding assessment requirements. These reports must be submitted within six (6) months post clinical training and every six (6) months thereafter until the completion of their outstanding training requirements, and trainees are eligible to apply for certification.

The Post-Year 3 Training Progress Report link can be found here: Post-Year 3 Training Progress Report

Please note you must not identify yourself as a Specialist in Maternal Fetal Medicine until all training requirements are satisfactorily completed, including the Written and Oral Examinations as well as the prospectively approved research project and you have been certified by the RANZCOG Board.

Scholarly Elective: Research Stream (Research Project)

A research project, on some aspect of, or pertaining to, the CMFM Subspecialty, must be completed by each Subspecialty trainee. The paper that reports on the research must be at a standard to be accepted in a peer-reviewed journal and must meet the criteria. The paper must report on original research work undertaken by the trainee and the trainee must be principal author of the paper. A Cochrane Review, which must be prospectively approved by the CMFM Subspecialty Committee, with the trainee as first author, also meets the CMFM research requirement.

The research project should be prospectively approved and demonstrate the basic principles of research: original hypothesis testing, research methodology, rigorous scientific method, and approved by the trainee's research and ethics Committee.

A draft of the Prospective Approval of Scholarly Elective Proposal and Timeline must be submitted with the first six (6)-month training documentation within the approved timeframe for submission of training documentation. A detailed final proposal of the Scholarly Elective: Research Stream with institutional ethics approval, if necessary, must be submitted to the CMFM Subspecialty Committee for approval by the end of the first forty-six (46) weeks FTE of training, within the approved timeframe for submission of training documents. Progress reports must be submitted with training documentation with the six (6) monthly TAR.

Post-Year 3 Training Progress Reports must be submitted at six (6) months post clinical training and thereafter every six (6) months, until all requirements are completed, and trainees are eligible to apply for certification.

Trainees must nominate a research supervisor. The supervisor could be the trainees previous Training Supervisor or other research mentor.

For trainees who commenced Subspecialty training from to 1 December 2018 they must submit their research paper for assessment within one (1) year of completion of clinical training and the research paper must be assessed satisfactory within three (3) years of completion of clinical training or the candidate will be recommended for removal from the Training Program.

For trainees who commenced training from 1 December 2018 your Research project must be submitted for assessment within one (1) year of completion of clinical training and satisfactory assessed within three (3) years of completion of clinical training.

A prospectively approved research project which has been published or accepted for publication in a journal with an impact factor of ≥ 2 or the ANZJOG will not need further assessment but must still be submitted to the CMFM Subspecialty Committee.

Scholarly Elective: Research Stream Assessment Outcomes

If the study is assessed as 'not satisfactory but suitable for resubmission' by both assessors, the Trainee's nominated research supervisor will assist the candidate to revise the paper which must be resubmitted within six (6) calendar months of notification of the result. The resubmitted study will be assessed by the original assessors.

If the assessors submit differing assessments with minor revisions, the Trainee's nominated research supervisor will assist the candidate to revise the paper which must be resubmitted within calendar months of notification of the result. The resubmitted study will be assessed by the original assessors.

If the assessors submit differing assessments with major revisions, the CMFM Subspecialty Committee Research Advisor, will appoint a third assessor who will assess the study without seeing the comments of the original assessors. The assessment of the third assessor will be the final assessment for the research study.

Scholarly Elective: Research Stream Resubmissions

In the event that the assessors submit differing assessments for a resubmitted study a third assessor will be appointed by the CMFM Subspecialty Committee who will assess the study without seeing the comments of the original assessors. The assessment of the third assessor will be taken as the final assessment for the research study.

If the study is assessed as unsatisfactory for a second time, the CMFM Subspecialty Committee will review the result, and the relevant Chair will provide a report on the Study and its assessments for the full Subspecialties Committee. A recommendation will be forwarded to the Chair of the Education & Assessment Committee (EAC) about an appropriate course of action. The final decision on the most appropriate course of action will be made by the Chair of the Education & Assessment Committee (EAC) in consultation with the Chair of the CMFM Subspecialty Committee.

Important Points

1. Proposals and progress reports of the research paper must be submitted with the TAR
2. Case reports and review articles are not acceptable for the thesis
3. All submissions for assessment must include the candidate statement for research papers detailing the trainee's role in the project. This is available from the RANZCOG website

Recognition of Prior Research

A formal higher research degree qualification in an area relevant to the Subspecialty may be approved as meeting the requirement for satisfactory completion of the research project. However, trainees to whom this applies will still be expected to be involved in ongoing research during their training.

Trainees who have completed a higher research degree must complete the Exemption from Scholarly Elective (Research Project) Application, available from the College website. Trainees who have completed a higher research degree must complete the Exemption from Scholarly Elective (Research

Project) Application, available from the RANZCOG website. This application must be submitted to the CMFM Subspecialty Committee Chair with the Year 1 prospective approval on commencement of Subspecialty training.

Details of ongoing research must be documented in the Scholarly Elective progress sections and submitted with each TAR.

Scholarly Elective link can be found here: Subspecialty Scholarly Elective

Scholarly Elective: Non-Research Stream

On 1 February 2021, the Scholarly Elective: Non-Research Stream option was introduced into the CMFM Subspecialty Training Program. Options for CMFM trainees include either:

- Research Stream (previous name "Research Project") or
- Non-Research Stream

The CMFM Subspecialty Committee introduced a new assessment stream for trainees who wish to undertake further vocational training instead of a research project.

To be considered for Prospective Approval the minimum requirements for the Non-Research Stream option must meet the following requirements:

- The course must progressively build on any previous RANZCOG training and have future vocational relevance
- The course cannot be merely a repetition of a part of the current CMFM curriculum.
- The course must provide complementary skill or educational development to the CMFM Subspecialty Training Program noting that the course is to:
  - Prepare practitioners for their future careers; and/or
  - Broaden their education and educational opportunities.
- Limited to one (1) course of study (not a combination of several courses)
- The course meets the minimum criteria of an Australia Framework Qualification (AQF) Diploma Level 5 (or above) or New Zealand Framework Qualification (NZQF) Diploma Level 5 (or above)
- The course submitted must be recognized at a Tertiary Institute or Professional College within Australia or New Zealand.

Approval for the Non-Research Stream is subject to the CMFM Subspecialty Committee Non-Research Advisors/Chair.

Non-Research Stream Proposal and Timeline

To apply for the Non-Research Stream CMFM trainees must submit and complete the Scholarly Elective Proposal and Timeline Application with the first Training Assessment Record (TAR) which is submitted within the first six (6) months of training. If resubmission is required, final submission for approval of the Non-Research Stream course must be sent with the second six (6)-monthly TAR.

Non-Research Stream Submission and Timeframes

CMFM trainees who elect the Non-Research Stream must complete the prospectively approved course within three (3) years of completing the clinical component of training.
Trainees are required to submit progress reports at six-month intervals until successful completion of the course.

All assessment-related components of the Non-Research Stream will be independent of RANZCOG and will rest solely with the institution with whom the training is conducted.
Evidence of completion must be submitted and approved by the CMFM Subspecialty Committee. In all cases, the assessment of satisfactory completion rests with the CMFM Subspecialty Committee Non-Research Advisors/Chair.

Recognition of Prior Learning (RPL) from Scholarly Elective Non-Research Stream

Where a course equivalent to that required in the Non-Research Stream has been completed prior to Subspeciality Training it may be approved as meeting the requirement for satisfactory completion of the Non-Research Stream of the scholarly elective.

To be considered for Recognition, the course must meet the following criteria:

- The course must have future vocational relevance
- Limited to one (1) course of study (not a combination of several courses)
- The course of study submitted must be recognised at a Tertiary Institute or Professional College.

Assessments for all RPL in the Non-Research Stream will be sanctioned by the relevant CMFM Subspecialty Committee.

Scholarly Elective link can be found here: Subspecialty Scholarly Elective

Examinations - Written and Oral

The examination dates, information, format and applications, are available on the RANZCOG website.
The information below is subject to change, please refer to the following link:

Subspecialty Examinations

Eligibility

CMFM Subspecialty trainees may make their first attempt at a CMFM Subspecialty Written examination after at least forty-six (46) weeks FTE of prospectively approved and satisfactory training in the CMFM Subspecialty Training Program.

Applications

Check RANZCOG website for application dates for both the Written and Oral examinations. Please contact assessment services for application and fee details. This information is available on the website.

Withdrawal

For all enquiries regarding withdrawal from the Written and Oral Examinations, contact Assessment Services.

For further information on withdrawal from the Written and Oral examination, refer to the *RANZCOG Regulation C4.3.*

RANZCOG Regulations - RANZCOG

Failure to give written notice of withdrawal from the examination or failure to present for an examination will constitute a failure in the examination and forfeiture of the whole examination fee.

Number of Attempts

Subspecialties trainees must attempt for the first time a Written or Oral Subspecialty examination within two (2) years completion of clinical training:

- For trainees commencing Subspecialty training from 1 December 2016 a maximum of three (3) consecutive attempts allowed for each examination
- For trainees who commenced Subspecialty training prior to 1 December 2020 they must pass the Written examinations within six (6) years of completing clinical training
- For trainees who commenced Subspecialty training after 1 December 2020 they must pass the Written examinations within four (4) years of completing clinical training

Format

Written Examination

The three (3) hours and 15-minute examination may comprise of ten (10) Short Answer Questions (SAQs).

Oral Examination

The Oral examination takes approximately three (3) hours duration, plus a short break (this may vary from year to year depending on the number of candidates enrolled) and may comprise of nine (9) clinical stations, each of fifteen minutes interaction and five (5) minutes reading time for each station. The examination will be held on a date determined by the CMFM Subspecialty Committee within six (6) months of the Written examination. This is subject to change, please refer to the website for further details.

Candidates rotate through each examination station and, before each station begins, will be given the introductory details of a clinical case or cases that will be developed during the encounter.

Stations may consist of one (1) or more examiners and an observer. At some stations there may be a standardised patient. Every attempt will be made to ensure that the trainee will not be directly examined by an examiner from the trainee's hospital.

Candidates should ask explicitly for additional relevant historical and physical details, for the results of investigations, for consultations if needed, and for responses to treatment.

Examiners may explore candidates' ability to deal with expected or unexpected complications or confounding events, and with simulated late-stage referrals.

Histological sections, videos, laboratory work sheets and microscopic photographs can be shown. Where a station consists of a critique of a journal article, candidates will be given time to read the article for 20 minutes immediately prior to the examination, with five (5) minutes to review the article before that station.

Notes may be made during the encounters (and while reading the published paper) but are to be left in the examination room.

Areas Covered by the Examinations

Both the Oral and Written examinations will have material drawn from the curriculum and may include the following areas:

1. Prenatal diagnosis and congenital malformations
2. Maternal disorders in pregnancy
3. Infections in pregnancy
4. Fetal and placental development, growth and well-being
5. Pre-term birth and neonatal adaptation
6. Multiple pregnancy
7. Critical appraisal and practice improvement

Release of Examination Results

The results of examinations are made available via secure login on the RANZCOG online assessment portal on a date specified by the College. Detailed information regarding accessing examination results is emailed to trainees prior to the release date.

Certification as a CMFM Subspecialist

Eligibility

Subspecialty Certification is awarded to persons who have met all the following CMFM Subspecialty Training Program requirements:

- Joined the CMFM Subspecialty Training Program in Australia and New Zealand after obtaining an approved Australian or New Zealand Subspecialty training position
- Have satisfactorily completed:
    - 138 weeks FTE of prospectively approved and credited clinical training
    - Scholarly Elective: Research Stream or Non-Research Stream
    - Written and Oral Examination
- Have submitted all documents required by the Regulations and/or the CMFM Subspecialty Committee
- Have paid all required fees including: training, examination, subscription and certification
- Trainees who commenced prior to 1 December 2020 must complete all of the above within six (6) years of satisfactorily completing approved CMFM clinical training
- Trainees who commenced after 1 December 2020, must complete all of the above within four (4) years of satisfactorily completing approved CMFM clinical training.
- Have been admitted by the Board as a Fellow of the RANZCOG
- Satisfactorily completed the requirements of the CMFM Subspecialty Training Program, including completion of all associated administrative requirements

Application Process

Trainees must submit an online Certification Application and Payment form available from the RANZCOG website via the following link:

Subspecialty Certification Application Form

A trainee must not identify themselves as a Specialist in Maternal Fetal Medicine until all training requirements are satisfactorily completed, including the Written and Oral examinations as well as the prospectively approved research project and you have been certified by the RANZCOG Board.

Curriculum

Aims

Subspecialist Practice

Maternal fetal medicine is a Subspecialty of Obstetrics and Gynaecology.

A Subspecialist in Maternal Fetal Medicine is a specialist in Obstetrics and Gynaecology possessing the FRANZCOG who has successfully completed an additional prescribed program of training in the area of Maternal Fetal Medicine.

This activity requires advanced knowledge of the obstetrical, medical and surgical complications of pregnancy and their effect on both the mother and the foetus. It requires expertise in the most current approaches to diagnosis and treatment of patients with complicated pregnancies and also requires a setting where requisite technical support is available.

The subspecialist will spend at least 66% of their time in the Subspecialty /Maternal Fetal Medicine.

Personnel with advanced knowledge of newborn adaptation are also necessary to ensure a continuum of excellence in care from the fetal to newborn periods.

Context

The highly specialised field of Maternal Fetal Medicine has emerged as a result of massive accumulation of new knowledge in fetal physiology and pathology and developments in clinical management, through the availability of new diagnostic techniques and treatments resulting in improved pregnancy outcomes. The subspecialist will be required to keep abreast of this knowledge and ensure its availability to mainstream obstetric practice.

Neonatal medicine is a recognised paediatric Subspecialty and referral units for neonatal intensive care have developed and contributed significantly to a reduction in neonatal mortality and morbidity. The development of subspecialists in Maternal Fetal Medicine is a logical parallel step in obstetrics to promote and ensure improved fetal outcome. These subspecialists will be responsible for pre pregnancy counselling, and antepartum and intrapartum care of the high-risk obstetric case.

The development of subspecialisation in Maternal Fetal Medicine highlights a developing and exciting area of obstetrics and gynaecology and will enhance recruitment of quality people into obstetrics and gynaecology in general and to the Subspecialty in particular.

The changing medico legal climate in Australia, particularly with respect to obstetrics, requires experts to keep abreast of the rapid pace of development in this field.

A subspecialist in Maternal Fetal Medicine would be expected to promote clinical and basic research in this field and would function as a regional consultant in matters of organisation, standards and education in the Subspecialty.

Aims of the Subspecialties

The College introduced certification in the five (5) subspecialties in order to:

- Improve knowledge, practice, teaching and research
- Promote the concentration of specialised expertise, special facilities and clinical material that will be of considerable benefit to some patients
- Improve the recruitment of talented graduates into areas of recognised subspecialisation
- Establish a close understanding and working relationship with other disciplines
- Encourage co-ordinated management of relevant clinical services throughout a region
- Accept a major regional responsibility for higher training, research and audit in areas of recognised subspecialisation
- Establish, as far as possible, consistency in recruitment, training and assessment across areas of recognised subspecialisation

Aims of the Subspecialty in Maternal Fetal Medicine

The College introduced certification in the Subspecialty of Maternal Fetal Medicine in order to:

- Further research in maternal and fetal physiology and pathology
- Utilise developments in clinical management and diagnosis to improve pregnancy outcomes
- Provide pre-pregnancy counselling and antepartum and intrapartum care of the high-risk obstetric case
- Provide expert diagnosis and knowledge to mainstream obstetric practice

Objectives of the CMFM Subspecialty Training Program

It is expected that the subspecialist in Maternal Fetal Medicine will be able to demonstrate:

- Knowledge of the basic sciences relevant to maternal and fetal medicine
- Thorough knowledge of the pathophysiology, methods of evaluation and treatment of the maternal disorders and pregnancy complications contributing to high fetal risk and early newborn problems. A full knowledge and competence in all of the modalities of fetal diagnosis and therapy. State of the art skills and competence in the management of all acute and chronic problems within the discipline of maternal and fetal medicine. (see major subgroups of patients below)
- Understanding of the concepts of investigative science and the development of skills in research methods
- Understanding of the organisation of health services in the areas of Maternal Fetal Medicine
- Understanding of the methods of quality assurance and audit

Major Subgroups of Patients

The practice of a Maternal Fetal Medicine subspecialist involves the following four (4) major subgroups of patients:

- Patients undergoing diagnostic procedures (including, but not limited, the following examples):
  - Comprehensive ultrasound
  - Amniocentesis and amnioreduction
  - Chorionic villus sampling
  - Fetal blood sampling
  - Fetal transfusion
  - Fetoscopy/embryoscopy
  - Fetal reduction
  - Other diagnostic procedures involving fetal diagnosis and therapy
- Patients with medical and surgical disorders (including, but not limited, the following examples):
  - Cardiac disease (both structural and functional)
  - Systemic lupus erythematosus
  - Diabetes mellitus
  - Chorionic hypertension
  - Thromboembolic disease
  - Antiphospholipid antibody syndrome
  - Neurological disorders such as seizure disorder
  - Disorders of coagulation
  - Disorders of thyroid function
  - Pheochromocytoma
  - Renal diseases, including chronic renal disease, renal transplantation
  - Patients receiving anticoagulation during pregnancy
  - Pulmonary hypertension
  - Hemoglobinopathies
  - Maternal malignant disease
  - Acute fatty liver of pregnancy

  - Severe respiratory disease, such as steroid dependent asthma, cystic fibrosis
    - Portal hypertension
    - Immune thrombocytopenia
    - Organ transplantation
    - Viral infection (i.e. Varicella, toxoplasmosis, parvovirus, cytomegalovirus)
    - Substance abuse (complicated)
    - HIV
- Healthy pregnant women with foetuses at marked increased risk of adverse outcome (including, but not limited, the following examples):
  - Preterm labour
  - Pre-labour rupture of membranes
  - High order multifetal pregnancies (triplets or greater)
  - Suspected IUGR
  - Incompetent cervix
  - Mullerian abnormalities
  - Multiple prior preterm deliveries
  - Abnormalities of amniotic fluid volume (oligohydramnios, polyhydramnios)
  - Foetus with major structural defect or cytogenetic abnormality
  - Fetal hydrops
  - Complicated multiple pregnancies
  - Twin-to-twin transfusion syndrome
  - Fetal cardiac arrhythmias
  - Prior or current feto-maternal alloimmune thrombocytopenia
  - Prior second trimester loss
  - Previous intrauterine fetal demise
- Consultation:
  - The Maternal Fetal Medicine subspecialist may provide consultation for any of the above conditions or any other condition in obstetrics

1. Knowledge and Understanding

The Building Blocks Required for the Development of Expertise in Maternal Fetal Medicine

This section details areas of knowledge that underpin the practice of maternal and fetal medicine. The purpose is to grasp the underlying principles on which modern maternal and fetal medicine practice is based, not merely to memorise facts. Understanding of these principles will develop with regular clinical experience, for it is the interaction between knowledge and practice that provides the basis for growth in clinical expertise.

The areas of knowledge presented in this section are categorized as follows:

- **Scientific knowledge** that forms the building blocks underpinning clinical practice
- **Clinical or applied knowledge** that links the science and the practice of gynaecological oncology
- **Contextual knowledge** (for example, consultation processes, business and management principles, professional expectations) that acknowledges the service obligations implicit in the practice of Maternal Fetal Medicine

Relevant knowledge may be accessed in a variety of ways, through textbooks, refereed articles in journals and book series, evidence-based electronic databases and publications, academic discourse, conference papers and many informal means of communication. It is through these publications and interactions that a consensus on standards is established for the discipline. Through these means, specialists certified in maternal and fetal medicine learn accepted terminologies, appropriate vocabulary, levels of understanding expected of them and key applications for their clinical work. As clinical professionals, they are expected to select, organise and test this knowledge through their own experience and in academic conversation with colleagues.

1.1 Anatomy

General Aim

Understand and describe the normal and abnormal anatomy of the pregnant woman, including the placenta, and describe normal human development.

Learning Objectives

1.1.1 Anatomy

- Understand and describe:
  - Vascularisation and innervation of the female pelvis and abdomen
  - Anatomical changes that occur during pregnancy and parturition
  - Placental development and anatomy, including umbilical cord and membranes

1.1.2 Embryology

- Understand and describe:
  - Normal human development from gametogenesis to birth
  - Cross-sectional anatomy of all parts of the foetus
  - Changing fetal appearances with increasing gestation

1.2 Fetal Physiology and Endocrinology

General Aim

Understand and describe normal and abnormal fetal and placental physiology and endocrinology, including responses to birth.

Learning Objectives

1.2.1 Fetal Physiology

- Understand and describe:
  - Normal fetal growth patterns and the factors regulating fetal growth
  - The physiological processes of maturation of fetal organs
  - Fetal cardiopulmonary physiology, including regulation of the fetal heart rate, oxygen and carbon dioxide transport and the fetal response to hypoxia
  - Fetal haematology
  - The patterns of fetal activity, including fetal movements and fetal breathing movements
  - Fetal adaptations to stress, such as alterations in fetal behaviour, and the relationship between blood flow, placental transfer and acid-base status
  - The mechanisms of regulation of the volume and composition of the amniotic fluid
  - The factors involved in the initiation of parturition
  - Fetal endocrinology and metabolism

1.2.2 Placental Physiology

- Understand and describe:
  - Placental transfer of gases, nutrients and other agents
  - Factors regulating placental blood flow
  - Structure, function, metabolism, synthesis and principles of assay of placental hormones and proteins (e.g. Pp5, sp1, PAPP-a)

1.2.3 Neonatal Physiology

- Understand and describe fetal cardiorespiratory and endocrine responses to birth

1.3 Maternal Physiology, Endocrinology and Biochemistry

General Aim

Understand and describe normal maternal physiology and the response to pregnancy, and maternal endocrinology and biochemistry.

Learning Objectives

1.3.1 Physiology

- Understand and describe normal maternal physiology and the response to pregnancy, including:
  - Metabolism and nutrition
  - Fluid, electrolyte and acid base balance
  - Cardiopulmonary function
  - Haematological, digestive and urinary systems
  - Immune mechanisms
  - Uterine changes during gestation and normal and abnormal labour

1.3.2 Endocrinology

- Understand the structure, function, metabolism, synthesis and principles of assay of hormones from the:
  - Hypothalamus and pituitary
  - Thyroid, pancreas, parathyroid
  - Adrenal cortex and medulla
  - Ovary
  - Placenta
  - Kidney (erythropoiesis)

1.3.3 Biochemistry

- Understand and discuss:
  - Steroid synthesis and metabolism in mother and foetus
  - Prostaglandin synthesis and metabolism in mother and foetus
  - Maternal and fetal lipid, carbohydrate and amino acid metabolism
  - Metabolism of bilirubin in mother and foetus
  - Synthesis and secretion of pulmonary surfactant
  - Biochemistry of the nucleic acids

1.4 Genetics

General Aim

Understand basic human genetics, current techniques in prenatal diagnosis, and relevant counselling methods

Learning Objectives

- Understand and describe:
  - Basic human genetics, including:
    - Mendelian modes of inheritance
    - Multifactorial inheritance
    - Meiosis and mitosis
    - Cytogenetics
    - Significance of translocation
- Details of the more common fetal and paediatric syndromes, including trisomy 13, 18 and 21, fragile X, Beckwith Wiedemann Syndrome, etc.
- Recombinant technology and its potential impact in medicine
- Techniques of gene manipulation
- Potential applications of DNA technology
- Engineering of transgenic organisms
- Techniques available in prenatal diagnosis, including Southern and Northern blotting, gene amplification (PCR), fluorescent in-situ hybridisation (FISH), principles of gene tracking using RFLPS and direct gene identification, biochemical analysis, ultrasound
- Understand counselling methods

1.5 Pharmacology

General Aim

Understand and describe pharmacological effects of drugs commonly used in obstetric practice and principles of teratogenesis.

1.5.1 Pharmacology

Learning Objectives

- Understand and describe:
  - The pharmacological effects of drugs in common use in obstetric practice, including details of metabolism, excretion and teratogenic effects
  - Placental transfer of drugs
  - Effects of drugs on the uterine and fetal circulation
  - Effects of tobacco and alcohol
  - Drugs and lactation
  - Drug interactions
  - Agents affecting the sympathetic and parasympathetic nervous system
  - Pharmacological control of labour

1.5.2 Teratology

- Understand and describe:
  - Mechanisms of teratogenesis
  - Known teratogens in human biology and their effects, including drugs and environmental agents
  - Risk factors, aetiology and implications of common abnormalities such as neural tube defects

1.5.3 Anaesthesia

- Understand the pharmacology of the commonly used local and general anaesthetics agents and their effects on mother and foetus
- Understand:
  - Indications and limitations of general and regional anaesthesia, and systemic analgesia and sedation
  - Pain response in pregnancy
  - Complications of anaesthesia
  - Principles of management of resuscitation and intensive care of the unconscious patient

1.6 Pathology

General Aim

Understand and describe the pathology of diseases that occur during pregnancy, and the value and limitations of investigations used to determine the cause of fetal death.

Learning Objectives

- Understand the pathology of diseases that occur during pregnancy, including:
  - Pregnancy-induced hypertension
  - Neurological disorders
  - Thromboembolism
  - Placental disease
  - Amniotic fluid embolism
  - Cardiac disease
  - Infections
  - Antepartum haemorrhage
- Understand the value and limitations of post-mortem examination of the foetus or neonate
- Understand additional investigations that can be used to assist in determining the cause of fetal death

1.7 Immunology

General Aim

Understand and describe the basics of immunology, and the epidemiology, pathophysiology, methods of diagnosis, treatment and prevention of infectious diseases during pregnancy and those that may affect the foetus.

Learning Objectives

1.7.1 Basic Immunology

- Primary and secondary immune response
- Mechanism of antibody production
- Monoclonal antibodies
- Origin and function of IGM, IGG, IGA, IGE
- Origin and function of t, b helper and suppressor lymphocytes
- HLA system and graft rejection
- Active and passive immunisation
- Changes in pregnancy, the foetus as a graft
- Fetal development of the immune system
- Immunological pregnancy tests
- Rhesus and other isoimmunisation
- Auto-immune disease
- Pathophysiology and epidemiology of infectious diseases during pregnancy
- Transmission and natural history of infectious diseases which may affect the foetus, including:
  - Rubella
  - Cytomegalovirus
  - Toxoplasmosis
  - Syphilis
  - Gonorrhoea
  - Herpes
  - Hepatitis
  - Listeria
  - Haemophilus
  - HIV
- Methods of diagnosis, treatment and prevention of infectious diseases

1.8 Diagnostic Techniques

General Aim

Understand and describe the physics of ultrasound, and the principles underpinning antenatal investigations.

Learning Objectives

1.8.1 Ultrasound

- Understand the physics of ultrasound, including:
  - Propagation of ultrasound in tissues
  - Details of equipment

- Transducers and display systems
- Focusing systems
- Causes of artefacts
- Standards and measurements in ultrasound
- Doppler principles and applications
- Biological effects in ultrasound

1.8.2 Antenatal Investigations

- Understand the principles underpinning antenatal investigations, including:
  - Ultrasound imaging
  - Doppler blood flow studies
  - Fetal heart rate monitoring
  - Amniocentesis
  - Chorion villus sampling
  - Percutaneous fetal blood sampling
  - Intrauterine transfusion
  - Other fetal surgical techniques relevant to the contemporary practice of Maternal Fetal Medicine

1.8.3 Other Techniques

- Understand the principles underpinning, including indications, for:
  - New imaging techniques such as CT scans and MRI
  - Corrective surgical procedure for neonates

1.9 Research

General Aim

Understand the principles and methods underpinning productive and ethical research, and the sharing of knowledge in the medical community.

Learning Objectives

1.9.1 Research Projects

- Understand the principles and practice of research, including:
  - Statistical methods as applied to biological research
  - Research methodology sufficient to design studies in clinical, epidemiological and laboratory settings
  - Procedures involved in evaluation of new diagnostic tests, including the principles of efficacy studies and of randomized controlled trials
  - Coordinating multi-centre trials
  - Critical evaluation of perinatal literature
  - Development and use of perinatal data collection systems

1.9.2 Publications

- Know the current RANZCOG and RCOG guidelines in maternal and fetal medicine
- Know the relevant Cochrane reviews
- Know significant published studies and trials in maternal and fetal medicine

1.10 Clinical Conditions

General Aim

Understand and describe the aetiology, pathogenesis, pathology, epidemiology, clinical presentation, investigation, management, prognosis and prevention of maternal, fetal, placental and neonatal disorders.

Learning Objectives

1.10.1 Obstetric

- Understand the aetiology, pathogenesis, pathology, epidemiology, clinical presentation, investigation, management, prognosis and prevention of the following conditions:

1.10.2 Mother

- Pregnancy-induced hypertension
- Systemic lupus erythematosis
- Diabetes (pre-existing and gestational)
- Haemorrhage and shock/collapse
- Intrauterine infection
- Thromboembolism
- Neurologic disorders
- Amniotic fluid embolism
- Early pregnancy complications
- Septic abortion
- Preterm prelabour rupture of membranes
- Preterm labour
- Malpresentation
- Red cell isoimmunisation, thrombocytopenia and allo-immune thrombocytopaenia
- Prolonged gestation
- Puerperal sepsis
- Mastitis
- Septicemic shock
- Recurrent pregnancy loss, early and late

1.10.3 Foetus

- Congenital malformations
- Preterm birth
- Intrauterine growth retardation
- Hypoxia and acidosis
- Alloimmunisation (isoimmunisation) and haemolytic disease
- On-immune hydrops
- Intrauterine infection
- Multiple pregnancy, including twin-to-twin transfusion syndrome, trap sequence, etc.
- Amniotic fluid volume abnormality
- Spontaneous abortion
- Fetal macrosomia
- Bacterial and viral infection
- Birth asphyxia and meconium aspiration
- Birth trauma
- Hyaline membrane disease
- Intracranial haemorrhages
- Postmaturity

1.10.4 Placenta

- Abnormalities of shape and size
- Placenta accreta
- Chorioamnionitis
- Infarction
- Chorioangioma
- Multiple pregnancy
- Histology of placental “insufficiency”
- Cord abnormalities
- Trophoblastic disease

1.10.5 Neonatal Paediatric

- Understand the aetiology, pathophysiology, diagnosis, sequelae, prevention and treatment for more common neonatal disorders, including:
  - Respiratory distress
  - Hyperbilirubinaemia
  - Infection
  - Seizures
  - Hypoglycaemia
  - Hypocalcaemia
  - Hypothermia
  - Cardiac disease

- Intracranial haemorrhage
- Necrotising enterocolitis
- The preterm infant
- The growth restricted infant
- Congenital abnormalities
- Cerebral palsy
- Understand the methods currently in use for evaluating short- and long-term handicaps

1.10.6 Medical and Surgical Conditions

- Understand the aetiology, pathogenesis, pathology, epidemiology, clinical presentation, investigation, management and prognosis of diseases associated with pregnancy, including diseases of:
  - Cardiopulmonary system
  - Endocrine system
  - Digestive system
  - Nervous system
  - Immune system
  - Urogenital system
  - Malignancies

1.11 Clinical Management

General Aim

Understand and describe counselling methods for high risk obstetric and medical conditions, and the principles underpinning the management of intrapartum complications.

Learning Objectives

- Understand preconception counselling principles and methods for disorders, including diabetes, previous preterm birth and other high risk obstetric and medical conditions
- Understand genetic counselling principles and methods
- Understand the principles underpinning intrapartum management, with particular reference to the following procedures:
  - Induction of labour
  - Utilisation of oxytocin, prostaglandins and tocolytic drugs
  - Fetal monitoring and scalp blood sampling in labour
- Management of obstetric emergencies, including:
  - Abruption
  - Severe pre-eclampsia
  - Eclampsia
  - Preterm labour
  - Antepartum haemorrhage
  - Diabetes
  - Amniotic fluid embolism

- Cord prolapse
- Shock
- Coagulopathy
- Maternal fluid balance
- Neonatal resuscitation

1.12 Professionalism and Management

General Aim

Understand and describe the organizational responsibilities inherent in the practice of Maternal Fetal Medicine.

Learning Objectives

- Understand the organizational responsibilities inherent in the practice of Maternal fetal medicine at a Subspecialty level, including:
  - Creating protocols for management
  - Establishing and maintaining regional transport systems with appropriate patterns of referral
  - Involvement in research advisory and ethics Committees
  - Participation in perinatal data collections systems
  - Organization and co-ordination of clinical meetings

1.13 Teaching

General Aim

Understand the principles and methods underpinning the teaching and assessment of practical and theoretical concepts.

Learning Objectives

- Understand the principles underpinning:
  - The facilitation of learning of patients, trainees, students and other health professionals
  - Apprenticeship learning
  - The provision of constructive feedback
  - Assessment of performance according to set performance criteria
- Understand the use of vocabulary that encourages and acknowledges learning
- Understand the learning needs of oneself and others

1.14 Ethics and the Law

General Aim

Understand and discuss the ethical and legal aspects of maternal and fetal medicine practice.

Learning Objectives

- Understand the RANZCOG Code of Ethical Practice as pertains to practice in maternal and fetal medicine
- Understand and discuss the ethical and legal aspects of maternal and fetal medicine practice, including:
  - Pre-implantation diagnosis

- Gene therapy
- Screening for genetic/fetal abnormality
- Rights of the foetus and neonate
- Termination of pregnancy
- Fetal reduction
- Research on embryo, foetus and neonate
- Refusal of treatment
- Contraception
- Blood-borne and sexually transmitted infections
- Maternal fetal conflict
- Health economics
- Inequalities in health care nationally and internationally

- Know the current RANZCOG and RCOG guidelines on termination of pregnancy

2. Clinical and Management Skills

Clinical and Management Skills Fundamental to the Practice of Maternal Fetal Medicine

Routine skill develops with practical experience. Subspecialists in maternal and fetal medicine perform complex skills that require much more than practical experience. Their skill set draws on a rich and interrelated store of knowledge that underpins and informs their practice. Their practice is characterized by professional attitudes and behaviours, and they review and update their practice continually to ensure the highest possible standard of healthcare delivery.

Maternal and fetal medicine subspecialists possess:

- Advanced knowledge of the obstetrical, medical, and surgical complications of pregnancy and their effect on both the mother and the foetus
- Expertise in the most current approaches to diagnosis and treatment of patients with complicated pregnancies
- Advanced knowledge of newborn adaptation to ensure a continuum of excellence in care from the fetal to newborn periods

All clinical skills and processes are underpinned by sensitive, appropriate and effective communication with the woman.

2.1 Maternal Medicine

General Aim

Be able to investigate, diagnose, counsel, treat and manage women with obstetrical, medical, and surgical complications of pregnancy.

Learning Objectives

- Counsel patients with a genetic risk and where the mother has any condition that may affect the development of the foetus, such as those at risk of having a fetal congenital abnormality, a history of diabetes, hypertension, drugs etc.
- Counsel patients with problems such as fetal abnormality

- Diagnose and treat patients with commonly occurring diseases in pregnancy
- Independently manage obstetrics patients with hypertension, kidney, heart, liver, blood, endocrine, gastrointestinal, pulmonary, immunological, nervous, and psychiatric conditions
- Diagnose and treat obstetrics patients with common infectious diseases
- Diagnose, treat and independently manage the mother and foetus affected by obstetric complications including early pregnancy complications, haemorrhage, shock/collapse, premature rupture of the membranes, preterm labour, malpresentation, iso-immunisation, prolonged gestation, and recurrent pregnancy loss
- Provide intrapartum management of high-risk pregnancies, with a high level of expertise in induction of labour, utilisation of oxytocin, prostaglandins and tocolytic drugs, use of partograms, fluid balance and transfusion, fetal heart monitoring, and prolonged labour
- Manage intrapartum emergencies such as abruption, fulminating pre-eclampsia, cord prolapse, shock, and coagulopathy
- Manage complications of the puerperium and medical disorders after delivery
- Counsel patients on the most suitable methods of fertility control
- Counsel a patient pre and post termination in a way that allows the patient to make her own informed choice and without judgemental pressures

2.2 Fetal Medicine

General Aim

Be able to investigate, diagnose, and manage fetal complications.

Learning Objectives

- Diagnose and treat commonly occurring fetal diseases
- Recognise, assess and manage fetal malformations, including assessment of associated syndromic and karyotypic abnormalities and counselling of parents
- Diagnose and manage genetic disease, including single gene defects, multifactorial conditions and chromosomal abnormalities
- Classify and assess fetal growth retardation
- Diagnose and manage conditions such as fetal hypoxia, hydrops fetalis, red cell isoimmunisation an amniotic fluid volume abnormality
- Manage multiple pregnancy and associated conditions, including twin-to-twin transfusion syndrome and TRAP sequence
- Systematically approach the investigation and management of fetal disease which cannot be diagnosed at initial presentation

2.3 Procedural and Surgical Skills

General Aim

Be able to perform surgical and ultrasound procedures relevant to obstetrical, medical and surgical complications of pregnancy.

Learning Objectives

- Expertly perform caesarean section, sterilisation procedures, cervical cerclage, external cephalic version, operative vaginal delivery (ventouse and forceps), techniques for control of haemorrhage, management of postpartum and postoperative complications, medical and surgical first and second trimester abortion
- Perform or be aware of the surgical techniques associated with termination of pregnancy
- Perform early pregnancy, anomaly, and fetal assessment ultrasound scanning
- Perform fetal and placental blood velocity scanning using Doppler ultrasound
- Perform ultrasound guided needling, including FBS and CVS
- Perform fetal therapeutic operative procedures such as transfusion or feto-amniotic shunting
- Perform ultrasound screening for assessment of trisomy 21, preterm birth, placental site, fetal anaemia, chorionicity
- Perform Doppler ultrasound screening for assessment of uterine, umbilical, and middle cerebral arteries, and ductus venosus
- Perform other diagnostic procedures, including amniocentesis (single and twin), CVS, amnioinfusion (prenatal and intrapartum), amnioreduction, vesicocentesis, biophysical profile, and FBS

Clinical Training Summary (CTS)

Subspecialty trainees may include up to 25 percent of directly supervised procedures ('Supervised Others') into their total number of 'personally performed' procedures, providing they supervised a FRANZCOG trainee.

2.4 Critical Care

General Aim

Apply critical care skills in the areas specific to CMFM practice.

Learning Objectives

- Be cognisant of:
  - Principles of intensive care medicine
  - Principles of invasive haemodynamic monitoring
  - Impact of pregnancy and the postpartum period in the management of the critically ill gravida

2.5 Surgical and Diagnostic Procedures

	Understand (not perform)	Direct Supervision	Perform Unassisted
Maternal Medicine			
Insertion of central venous pressure catheter	⍰		
Insertion of pulmonary artery catheter	⍰		
Genetics			
Ultrasound screening for trisomy 21 (first and second trimester)			⍰
Cytogenetics	⍰		
FISH and PCR	⍰		
Direct mutation detection	⍰		
Biochemical analysis	⍰		
Analyte analysis	⍰		
Fetal Anomalies			
Fetal echocardiography			⍰
Amniocentesis			⍰
Twin amniocentesis			⍰
CVS			⍰
Amnioinfusion			⍰
Amnioreducton			⍰
Vesicocentesis			⍰
Shunt (pleuro- and vesicoamniotic)		⍰	
Placental laser	⍰		
Selective pregnancy reduction	⍰		
Fetal post-mortem examination	⍰		
Fetal MRI	⍰		
Paediatric surgery, including abdominal wall defect, diaphragmatic hernia, bowel atresia, spina bifida	⍰		
Antenatal Complications			
Ultrasound screening for assessment of:			
• preterm birth			⍰
• placental site			⍰
• chorionicity			⍰
• fetal anaemia			⍰
Doppler ultrasound screening for assessment of:			
• uterine artery			⍰
• umbilical artery			⍰
• middle cerebral artery			⍰
• ductus venosus			⍰
Cervical cerclage (elective and rescue)			⍰
Fetal red cell intravascular transfusion		⍰	
Fetal platelet intravascular transfusion		⍰	
Intrapartum Care			
FBS			⍰
Improve fetal acidaemia (physiological and pharmacological methods)			⍰
Amnioinfusion			
Repair of uterine rupture		⍰	
Peripartum hysterectomy		⍰	
Correction of uterine inversion		⍰	
Insertion of uterine balloon		⍰	
Insertion of brace suture		⍰	
Internal iliac artery ligation	⍰		
Caesarean section:			
Major placenta praevia			⍰
Placenta accreta/percreta		⍰	
Fetal anomaly (likely dystocia)			⍰
Extensive abdominal surgery			⍰
Large fibroids			⍰

⍰⍰*required*

2.6 Management and Professional Responsibilities

General Aim

Be able to apply sound management and administrative skills to their professional practice.

Learning Objectives

2.6.1 Management

- Apply:
  - The basic principles of Human Resources Management
  - The steps associated with recruiting staff
  - Principles of good staff supervision
- Advocate on behalf of junior staff
- Counsel staff and mange conflict resolution in the workplace

2.6.2 Administration

- Create protocols for management
- Establish and maintaining regional transport systems with appropriate patterns of referral
- Be involved in research advisory and ethics Committees
- Participate in perinatal data collections systems
- Organize and co-ordinate clinical meetings

2.6.3 Clinical Service Delivery

- Take steps to minimise areas of potential complaint in the delivery of clinical services
- Ensure that staff communicate clearly, verbally and in writing, with the women in their care
- Discuss costs, where appropriate, before treatment
- Provide consistent information
- Apologise where you have inconvenienced a woman in your care or made an error
- Personally discuss complaints with women in one's care
- Be able to convey bad news and sub-optimal outcomes compassionately, appropriately and in person

2.6.4 Business / Financial Management

- Apply the principles of effective bookkeeping
- Understand issues related to insurance, including professional indemnity and public liability
- Understand how income is affected by patient satisfaction and the ability to pay

2.6.5 Risk Management

- Understand the principles and importance of risk management
- Understand the importance of continuing professional development in both a risk management and service improvement context
- Understand the importance and functional basis of continuing professional development program in risk management and practice improvement

2.6.6 Relationships with Professional Bodies

- Understand the need for accountability and its relationship to registration
- Understand the role of the relevant medical board and healthcare complaints body
- Understand the roles of the RANZCOG

2.6.7 Teamwork

- Understand the principles and importance of:
  - Good communication
  - Defining areas of individual responsibility
  - Collective goal setting
  - Providing opportunities for all team members to contribute

2.6.8 Time Management

- Understand the principles and importance of time management.

2.6.9 Project Management

- Understand the importance of defining the scope of a project, the clustering of tasks and the principles of delegation.

2.6.10 Economics

- Understand the basic principles of supply and demand, cost (total/marginal/average), profit, cost
- Effective analysis and cost utility analysis.
- Explain to patients the realities of health resource allocation.

2.7 Research Skills

General Aim

Be able to undertake productive and ethical research and share knowledge in the medical community.

Learning Objectives

- Use electronic databases such as Medline and the Internet to conduct literature searches and to locate information
- Critically appraise/evaluate relevant literature, reviews and new techniques/technologies

- Use word processors, databases, spreadsheets and statistical packages to produce statistical analyses and research papers
- Conduct a literature review
- Develop a hypothesis to be tested
- Choose an appropriate research methodology and design a research study
- Write a grant application to fund a research project
- Apply for ethics Committee approval for a clinical or laboratory-based study
- Collect, collate and interpret data
- Apply basic statistical analysis to clinical data
- Develop an outline structure for a research paper
- Write a literature review for a research paper
- Apply the developed outline to write a research paper

Recommended Resources

Texts

Abuhamad, A. & Chaoui, R. A practical guide to fetal echocardiography: normal and abnormal hearts. (Lippincott Williams & Wilkins, 2022).

Obstetric evidence-based guidelines. (CRC Press, 2021).

Maternal-fetal evidence-based guidelines. (CRC Press, Taylor & Francis Group, 2022).

Clarke, A. & Harper, P. S. Harper's practical genetic counselling. (CRC Press, 2020).

Gardner, R. J. M. & Amor, D. J. Gardner and Sutherland's chromosome abnormalities and genetic counseling. (Oxford University Press, 2018).

High-Risk Pregnancy: Management Options: Five-Year Institutional Subscription with Online Updates. (Cambridge University Press, 2017).

Keeling's fetal and neonatal pathology. (Springer, 2022).

Lockwood, C. J., Moore, T., Copel, J. A., Silver, R. M. & Resnik, R. Creasy and Resnik's maternal-fetal medicine: principles and practice. (Elsevier, 2022).

Nelson-Piercy, C. Handbook of obstetric medicine. (CRC Press, 2020).

Paladini, D. & Volpe, P. Ultrasound of congenital fetal anomalies: differential diagnosis and prognostic indicators. (CRC Press/Taylor & Francis Group, 2014).

Palasanthiran, P., Starr, M., Jones, C. & Giles, M. Management of Perinatal Infections. (2014).

Fetal medicine: basic science and clinical practice. (Elsevier, 2020).

Schoenwolf, G. C., Bleyl, S. B., Brauer, P. R. & Francis-West, P. H. Larsen's Human Embryology E-Book. (Elsevier, 2021).

Woodward, P. J. et al. Diagnostic imaging obstetrics. (Elsevier, 2021).

Websites

Australasian Society for Ultrasound in Medicine (ASUM)	www.asum.com.au
Society for Maternal fetal medicine (SMFM)	www.smfm.org
International Society for Ultrasound in Obstetrics and Gynaecology (ISUOG)	www.isuog.org
Society of Obstetric Medicine in Australia and New Zealand (SOMANZ)	www.somanz.org
Fetal Medicine Foundation	www.fetalmedicine.com
Perinatal Society of Australia and New Zealand (PSANZ)	www.psanz.com.au
American Institute of Ultrasound in Medicine (AIUM)	www.aium.org
MedlinePlus Genetics	www.medlineplus.gov/genetics/

Appendices

Acronyms

AAVIS	Australian Association of Vaginal and Incontinence Surgeons
AGES	Australian Gynaecological Endoscopy Society
AMC	Australian Medical Council
ANZJOG	Australian and New Zealand Journal of Obstetrics and Gynaecology
CGO	Certification in Gynaecological Oncology
CMFM	Certification in Maternal Fetal Medicine
COGU	Certification in Obstetrical and Gynaecological Ultrasound
CPD	Continued Professional Development
CREI	Certification in Reproductive Endocrinology and Infertility
CU	Certification in Urogynaecology
DDU	Diploma of Diagnostic Ultrasound (available through Australasian Society of Ultrasound in Medicine)
EAC	Education and Assessment Committee of the RANZCOG
FIGO	International Federation of Obstetricians and Gynaecologists
FRANZCOG	Fellow of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists
FRCOG	Fellow of the Royal College of Obstetricians and Gynaecologists (UK)
IHCA	In-Hospital Clinical Assessment
IHCE	In-Hospital Clinical Examination
IMG	International Medical Graduate
MCQ	Multiple Choice Questions
MRANZCOG	Member of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists
MRCOG	Member of the Royal College of Obstetricians and Gynaecologists (UK)
NASOG	National Association of Specialists in Obstetrics and Gynaecology
NHMRC	National Health and Medicine Research Council
OandG (O&G)	Obstetrics and Gynaecology
RACGP	Royal Australian College of General Practitioners
RACS	Royal Australian College of Surgeons
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RCOG	Royal College of Obstetricians and Gynaecologists (UK)
SIMG	Specialist International Medical Graduate
TAC	Training Accreditation Committee of the RANZCOG
TAR	Training Assessment Record

Abbreviations Used/Accepted in CMFM Subspecialty Examinations and Training Documentation

AB	Missed Abortion
AC	Abdominal Circumference
AFI	Amniotic Fluid Index
AFP	Alphafetoprotein
AMA	Advanced Maternal Age
AMNIO	Amniocentesis
APH	Antepartum Haemorrhage
ARM	Artificial Rupture of Membranes
BO	Blighted Ovum
BP	Blood Pressure
BPD	Biparietal Diameter
CIN	Cervical Intraepithelial Neoplasia
CPC	Choroid Plexus Cyst
CRL	Crown Rump Length
CSU	Catheter Specimen of Urine
CTG	Cardiotocograph
CVS	Chorionic Villus Sampling
DandC	Dilation and Curettage
ECG	Electrocardiograph
ECV	External Cephalic Version
EFW	Estimate Fetal Weight
EUA	Examination Under Anaesthesia
FBC	Full Blood Count
FBE	Full Blood Examination
FBS	Fetal Blood Sampling
FHR	Fetal Heart Rate
FL	Femur Length
FSH	Follicle Stimulating Hormone
GTT	Glucose Tolerance Test
Hb	Haemoglobin
HCG	Human Chorionic Gonadotropin
H MOLE	Hydatidiform Mole
HC	Head Circumference
IUCD	Intrauterine Contraceptive Device
IUGR	Intrauterine Growth Retardation
IUT	Intrauterine transfusion
LFTs	Liver Function Tests
LH	Luteinising Hormone
LMP	Last Menstrual Period
LNMP	Last Normal Menstrual Period
LUSCS	Lower Uterine Segment Caesarean Section
MSU	Midstream Specimen of Urine
NAD	Nothing Abnormal Detected
NTD	Neural Tube Defect
PCOS	Polycystic Ovarian Syndrome
PP	Placenta Praevia
PPH	Post-Partum Haemorrhage
PR	Per Rectum
PV	Per Vaginam
RBC	Red Blood Cells
SD RATIO	Systolic / Diastolic Ratio
SLE	Systemic Lupus Erythematosus
TAH	Total Abdominal Hysterectomy
UA	Umbilical Artery
UandEs	Urea and Electrolyte
VDRL	Venereal Disease Reference Laboratory Test
WBC	White Blood Cells

Glossary of Terms

ACCREDITATION
The formal process by which a hospital obtains recognition from the RANZCOG as a training unit/site for RANZCOG Training Programs.

ACCREDITED HOSPITAL
A hospital which has been accredited by the RANZCOG as a training unit/site for RANZCOG Training Programs.

ASSESSMENT OF PROCEDURAL SKILLS (APS)
Assessment of surgical and procedural skills undertaken in-situ and across multiple occasions.

AUSTRALIAN SOCIETY FOR ULTRASOUND OF MEDICINE (ASUM)
A multidisciplinary society advancing the clinical practice of diagnostic medical ultrasound for the highest standards of patient care.

BOARD
The governing body of the RANZCOG with an elected term of two, two (2)-year terms.

CANDIDATE
A person attempting the Written and/or Oral examinations and/or IHCA for the COGU Subspecialty and/or the IHCE for the CMFM Subspecialty.

CERTIFICATION
The formal process by which a trainee who has met all relevant Subspecialty selection, training and assessment criteria is recognised as a Subspecialist, after also attaining Fellowship of the RANZCOG.

CERTIFICATION IN GYNAECOLOGICAL ONCOLOGY (CGO)
Certification in the treatment of genital malignancy after attaining Fellowship of the RANZCOG.

CERTIFICATION IN MATERNAL FETAL MEDICINE (CMFM)
Certification in the area of maternal and fetal physiology and pathology after attaining Fellowship of the RANZCOG.

CERTIFICATION IN OBSTETRICAL AND GYNAECOLOGICAL ULTRASOUND (COGU)
Certification in obstetrical and gynaecological ultrasound after attaining Fellowship of the RANZCOG.

CERTIFICATION IN REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY (CREI)
Subspecialty training of three (3) years' duration in the treatment of reproductive endocrine disorders and infertility undertaken after attaining Fellowship of the RANZCOG.

CERTIFICATION IN UROGYNAECOLOGY (CU)
Certification in the field of Urogynaecology, after attaining Fellowship of the RANZCOG.

CLINICAL TRAINING SUMMARIES (CTS)
Sheets containing summaries of the clinical experiences (both primary operator procedures and assists) recorded by a trainee in their Logbook. These summaries are compiled by the trainee every six (6) months and checked/signed by the Chair of the CMFM Subspecialty Committee.

COLLEGE (RANZCOG)
The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

CONTINUING PROFESSIONAL DEVELOPMENT (CPD)
The RANZCOG program for continuing professional development in which all Fellows of the College must participate to qualify for renewal of their Fellowship or Subspecialty Certification, annually.

CONSULTANT
A specialist in obstetrics/gynaecology and Fellow of the College or Certified Subspecialist with whom a trainee trains in an accredited Subspecialty training unit.

CONSULTANT ASSESSMENT of TRAINEE REPORT
A form completed every six (6) months by each consultant working with a trainee, assessing the trainee's knowledge, skill and attitudes. From these forms the relevant Training Supervisor compiles the six (6)-monthly summative assessment report and added in the TAR.

COUNCIL
The governing body of the RANZCOG with an elected term of two (2) years.

CREDITED TRAINING
A period of prospectively approved training of not less than 10 weeks (FTE) period for which a trainee has satisfactorily completed all assessment requirements and paid the necessary annual training fee.

EDUCATION & ASSESSMENT COMMITTEE (EAC)
A Standing Committee of Council responsible for developing and maintaining the requirements for examinations and assessments leading towards the FRANZCOG and Subspecialty qualifications.

ELEVATION
The formal recognition that a trainee who has met all relevant selection and assessment criteria is a Fellow (FRANZCOG) of the College.

EXAMINER
A specialist in obstetrics/gynaecology formally approved by the RANZCOG to assess the Written and Oral examinations for a Subspecialty.

FORMATIVE APPRAISAL RECORD (FAR) – THREE MONTLY
A compulsory self-assessment in competencies in the categories of clinical, academic and professional abilities undertaken before meeting with the Training Supervisor.

FELLOWSHIP (FRANZCOG)
The qualification awarded to a trainee, subject to approval by Council, who has satisfactorily completed all assessment and administrative requirements for the designated 276 weeks FTE of FRANZCOG training.

IN-HOSPITAL CLINICAL ASSESSMENT (IHCA) for COGU
A requirement of the COGU Training Program in diagnostic ultrasound. COGU Subspecialist examiners examine this assessment.

IN-HOSPITAL CLINICAL EXAMINATION (IHCE) for CMFM
A requirement of the CMFM Subspecialty Training Program in diagnostic ultrasound. CMFM Subspecialist examiners, assess this examination.

LOGBOOK
A record of clinical experiences available must be kept by CMFM trainees for every year of their FRANZCOG / Subspecialty training.

PROGRAM DIRECTOR
A certified Subspecialist responsible for planning and co-ordinating a Subspecialty Training Program at an accredited Subspecialty Training Unit.

REGISTRATION OF TRAINEES (Registration Form A)
The formal College record of all those undertaking the Subspecialty Training Programs.

REGULATIONS
The formal stipulation of training requirements and the conduct of examinations and assessments approved by the Council of the RANZCOG.

RESEARCH-BASED DISCUSSION (RBD)
Assessment of an individual's analysis of contemporary research related to their discipline.

SCHOLARLY ELECTIVE: RESEARCH OR NON-RESEARCH STREAMS

RESEARCH STREAM
Experience in research, in clinical obstetrics and gynaecology or original research work of sufficient quality and which meets the requirements of the Subspecialty Training Programs. Trainees are required to submit this as part of their assessment when completing the Research Stream.

NON-RESEARCH STREAM
CMFM, COGU & CREI trainees have the additional option of completing a prospectively approved vocational training course with relevance to their chosen Subspecialty.

TRAINEE FEEDBACK SURVEY (ONLINE)
A confidential questionnaire on all aspects of training, which trainees are asked to complete at the end of each six (6)-month training period and submit with their TAR.

SPECIALIST INTERNATIONAL MEDICAL GRADUATE (SIMG)
A medical practitioner in obstetrics/gynaecology who does not have an Australian or New Zealand primary medical degree and/or Australian/New Zealand residency status, and who must apply to the RANZCOG for assessment of their eligibility for specialist and/or subspecialist recognition.

STATEMENT OF UNDERSTANDING (SoU)
The Statement of Understanding must be completed annually.

SUBSPECIALTIES COMMITTEES
Six (6) Committees (an umbrella Committee and one (1) for each Subspecialty) responsible for the development and maintenance of training and assessment requirements to achieve qualification in a Subspecialty.

SUBSPECIALTY SELECTION
A formal process of selection applying to all prospective trainees intending to undertake the Certification in Gynaecological Oncology (CGO), Maternal Fetal Medicine (CMFM), Obstetric and Gynaecological Ultrasound (COGU), Reproductive Endocrinology and Infertility (CREI), and Urogynaecology (CU).

SUBSPECIALTY TRAINING PROGRAM
A 138 weeks (three (3) year) full time (FTE) Training Program leading to a certificate in one of the following areas:
Gynaecological Oncology (CGO); Maternal Fetal Medicine (CMFM); Obstetrical and Gynaecological Ultrasound (COGU); Reproductive Endocrinology and Infertility (CREI); and Urogynaecology (CU).

SUBSPECIALTY TRAINING SUPERVISOR

A consultant and Subspecialist, who is a member of staff in an accredited hospital unit, responsible for the co-ordination and ongoing supervision of Subspecialty trainees in that unit, including the formal assessment of one (1) or more trainees every six (6) months.

TRAINEE
A medical practitioner, who meets the eligibility criteria described in the RANZCOG Regulations and whose training has been prospectively approved), undertaking a FRANZCOG or Subspecialty Training Programs.

TRAINING ASSESSMENT RECORD (TAR) – SIX MONTHLY
A collection of documents, compiled every six (6) months, recording and presenting for assessment, all the completed training experiences of each Subspecialty trainee.

TRAINING POSTION
A hospital position in an accredited hospital, which has been accredited by the RANZCOG as suitable for training towards FRANZCOG/Subspecialty Training Program certification.

TRAINING UNIT
One (1) or more units/sites that have been accredited as a group by RANZCOG as suitable for training towards Subspecialty Certification.

TRAINING YEAR
A 'Subspecialty training year' consists of two (2) consecutive 'six (6)-month training blocks' based around (but not confined to) a calendar year and is determined by the CMFM Subspecialty Committee.

WORKPLACE BASED ASSESSMENTS (WBA's)
Assessment of skills and behaviours in-situ and across multiple occasions.

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