



ANZCA
FPM

Effective Management of
Anaesthetic Crises (EMAC)

Handbook

Version 3.0

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Contents

Contents.....	3
Section 1: EMAC Course and accreditation framework.....	4
1.1 The EMAC course	4
1.2 Purpose of EMAC accreditation	4
1.3 Scope of accreditation	4
1.4 Accreditation standards	4
Section 2: Accreditation Standards and Processes	5
2.1 Simulation centre governance	5
2.2 Staffing requirements	5
2.3 Facilities.....	7
2.4 Other facilities.....	9
2.5 Equipment and Environment	9
2.6 Courses.....	11
2.7 Quality assurance and Improvement.....	11
2.8 Accreditation of simulation centres for delivery of the EMAC course	13
2.9 Appointment of EMAC accreditation visitors.....	14
Section 3: Roles.....	15
3.1 Supervisor of EMAC	15
3.2 Full EMAC Instructor	16
3.3 Assistant EMAC Instructor.....	17
3.4 Associate EMAC Instructor.....	18
3.5 EMAC Course Convener	18
Section 4: Pre-Approval of simulation instructor courses	19
Section 5: Governance	20
5.1 EMAC course subcommittee	20
5.2 Supervisor of EMAC network.....	20
Section 6: Related Documents.....	20
Section 7: Fees	20
Section 8: Contact ANZCA.....	20
Appendix: EMAC pre-approved instructor course learning outcomes	22

Section 1: EMAC Course and accreditation framework

1.1 The EMAC course

The simulation-based Effective Management of Anaesthetic Crises (EMAC) course provides training in the management of anaesthetic emergencies. The course consists of five modules run over two and a half days covering the topics of Human Factors, airway management, cardiovascular emergencies, anaesthetic emergencies and trauma management. The EMAC learning outcomes are listed in the ANZCA Anaesthesia Training Program Curriculum as Appendix 6 – Learning outcomes currently mapped to the Effective Management of Anaesthetic Crises (EMAC) course.

This handbook defines the requirements of the Australian and New Zealand College of Anaesthetists (ANZCA) for centres offering EMAC courses or which are seeking accreditation to offer the EMAC course.

1.2 Purpose of EMAC accreditation

The purpose of the EMAC accreditation process is to:

- assure the quality and consistency of EMAC course delivery for trainees of ANZCA and the Hong Kong College of Anaesthesiologists.
- establish and assess compliance with standards for high-quality EMAC delivery.
- enable and support centres to achieve and maintain the standards required for delivery of the EMAC course.
- support ongoing quality assurance and continuous quality improvement, including between formal accreditation visits.
- assure the safe delivery of simulation-based education and training, including physical and psychological safety.

1.3 Scope of accreditation

EMAC accreditation applies to the combined capability of the simulation centre, its staff, the ANZCA appointed Supervisor of EMAC and credentialled EMAC faculty to deliver the EMAC course to the standards required by ANZCA. Accreditation therefore applies to the EMAC program as a whole and is not approval of the physical facility or simulation equipment in isolation.

In determining accreditation, ANZCA considers the centre's governance; faculty and staffing, simulation facilities and learning environment, equipment and monitoring, course delivery and systems for quality assurance and continuous quality improvement as an integrated whole.

The Supervisor of EMAC has overall responsibility for the quality of EMAC course delivery at the centre, including ensuring that sufficient appropriately trained and credentialled faculty are available for each course.

1.4 Accreditation standards

The EMAC accreditation standards are organised across six domains:

1. Simulation centre governance
2. Faculty and staffing
3. Simulation facilities and learning environment
4. Equipment, simulators and monitoring
5. Course delivery quality
6. Quality assurance and continuous quality improvement

Section 2: Accreditation Standards and Processes

Accredited centres must have a suitable governance structure to ensure that they meet the relevant standards set by ANZCA as well as processes to ensure they comply with local regulations pertaining to employment and occupational health and safety.

Appointed faculty and staff must be appropriate for the Centre's overall purpose, in addition to suitability to the EMAC Courses.

2.1 Simulation centre governance

Suitable governance requirements must include the following: Purpose and mission statement.

2.1.2 Strategic business plan to ensure adequate resources (staffing, recurrent and capital expenditure) to support future delivery of high quality EMAC courses.

2.1.3 Quality improvement plan in place.

2.1.4 Appropriate repairs, maintenance and replacement strategy.

2.1.5 Evidence of compliance with local Occupational Health and Safety (OHS) / Work Health and Safety (WHS) guidelines.

2.1.6 Centre policy and procedure manual noting in particular, the presence of appropriate policies on:

2.1.6.1 Use of medications including gases and fluids (expired/real/re-labelled).

2.1.6.2 Privacy and confidentiality.

2.1.6.3 Video recording and storage of digital data.

2.1.6.4 Use of defibrillation in an oxygen enriched environment and attention to fire safety.¹

2.1.6.5 Dealing with 'real' clinical events.

2.1.6.6 Security including access to the facility.

¹ Mannequins can accumulate oxygen in their cavities and circuitry may cause sparks initiating fire, note Laerdal safety advisory alert

2.2 Staffing requirements

2.2.1 An Organisational Chart and associated position descriptions to be provided for all Simulation Centre staff; including but not limited to:

2.2.1.1 A designated leadership position (e.g. Centre Director) with responsibility for centre governance and overall simulation centre operations.

2.2.1.2 Administrative officer.

2.2.1.3 Staff to support audio-visual, information/communications technology and biomedical needs.

2.2.1.4 A designated Supervisor of EMAC with overall responsibility for EMAC courses in that centre. See [Supervisor of EMAC guidelines](#).

2.2.2 For each course that is delivered, a designated EMAC Course Convener must be present for the duration of the course. Refer to 'Convener' under 'Roles' below.

2.2.3 It is highly recommended that a core group of credentialed EMAC Instructors attend the entire course. For courses with 12 participants:

2.2.3.1 A minimum of two Full EMAC Instructors are required for the human factors module.

2.2.3.2 A minimum of four Full or Assistant EMAC Instructors are required for the remaining modules, at least two of whom must be Full EMAC Instructors.

2.2.4 A minimum of four additional staff are recommended to ensure high-quality course delivery. These may be senior anaesthetic trainees or other designated personnel:

2.2.4.1 Three staff to fill the variety of roles, one of whom must be 'console-capable', for each concurrent simulation session.

2.2.4.2 One dedicated console operator.

2.2.4.3 It is recommended the primary and secondary debriefer do not play active roles within the scenarios.

2.2.5 Embedded staff acting in simulations must fill their roles in a manner capable of meeting educational goals described in the *EMAC Instructors' Manual*. Embedded staff should be properly trained and act under the direction of the Convener. Embedded staff play an important role in maintaining orientation to time, place and person for simulation participants in addition to their role as surgeon or other staff member.

Below is a table of recommended staffing numbers for each module.

MODULE	TOTAL STAFF/ROLES	DESCRIPTION OF STAFFING/ROLES	TOTAL INSTRUCTORS & INSTRUCTOR ROLES
Module 1 Human Factors	7	Console operator	Instructor x 2
		Instrument or PACU nurse depending on scenario	Instructors to be hand-over anaesthetist
		Circulating nurse	
		Anaesthetic nurse / capable	
		Surgeon	
Module 2 Cardiovascular emergencies	9	Console operator	Instructor x 4
		Instrument nurse	Instructors to be hand-over anaesthetist, phone call roles and patient voices
		Circulating nurse / PACU nurse	
		Anaesthetic nurse / capable	
		Surgeon	
Module 3 Airway emergencies	7	Console operator	Instructor x 4
		Circulating nurse	Instructor to be hand-over anaesthetist
		Anaesthetic nurse / capable	
Module 4 Anaesthetic emergencies	9	Console operator	Instructor x 4
		Circulating or ED junior (depending on scenario)	Instructor to be hand-over anaesthetist and simulated switchboard
		Surgeon / Neurosurg reg or ED physician (depending on scenario)	
		Instrument or ED charge nurse (depending on scenario)	
		Anaesthetic nurse / capable	

Module 5	7	Console operator	Instructor x 4
Trauma		Anaesthetic nurse / capable	
		Surgeon x 2 or physician	Instructor to be hand-over anaesthetist
		Instrument nurse	

For optimum contribution to student learning and minimum disruption to their note-taking, it is recommended that Instructors / debriefers do not play an active role in scenarios. Debriefers can play brief handover roles or switchboard / voice-overs from console room.

2.3 Facilities

The following are necessary, with the layout determined by local centre design:

Instructors' area

2.3.1 An area for instructors to prepare teaching materials, with access to the internet and standard office equipment.

Training facilities

Seminar and de-briefing rooms

2.3.2 Two rooms are required; one must be capable of seating all participants and instructors at the same time.

2.3.3 Each room must have traditional or interactive whiteboard(s) and audio-visual presentation capability including the ability to receive a live stream from the simulation rooms.

2.3.4 Rooms must be soundproofed to quiet conversation level to ensure audio separation when concurrent simulations and debriefings are in progress.

Skills Station Rooms

2.3.5 Two rooms large enough to accommodate six participants and one instructor around a part-task trainer are required.

Simulation Rooms

2.3.6 The centre must be able to run concurrent immersive simulations. This requires two 'clinical' rooms each with an audio-visual system that enables live streaming to the debriefing rooms and at least one control room from where staff and faculty can operate mannequins and observe participants.

2.3.7 The control room and audio-visual system should have the following capabilities:

2.3.7.1 The audio-visual system must enable direct communication between faculty in the control room and participants and embedded staff in the simulation room. This may entail the use of two-way headsets so that console operators can communicate with embedded staff and a telephone system so participants can perform various tasks including obtaining results and calling for advice or help. An overhead paging or alert system is desirable.

2.3.7.2 The control room must enable observation of the simulation rooms either directly with the use of reflective, one-way glass or indirectly using the audio-visual system.

2.3.7.3 The audio-visual system should enable live streaming and recording of simulations. An intuitive, user-friendly interface that supports playback of selected video segments during post-simulation debriefings is desirable.

- 2.3.7.4 Audio and video must be of sufficiently high quality to enable accurate observation of the simulations from both the control room and remotely via the audio-visual feed to the debriefing rooms. There should be no delays in the audio-visual stream to ensure console operators and faculty can respond immediately to changes in the simulation as it unfolds.
- 2.3.7.5 The mannequin voice should appear to come from the head of the mannequin.
- 2.3.7.6 Cameras should be pan-tilt-zoom so faculty can adjust views in real time from the control room.
- 2.3.7.6.1 The number of cameras and type of microphone should be carefully selected to ensure no dead zones. The number of cameras may vary according to the room size.
- 2.3.7.7 The audio-visual system must be capable of live-streaming multiple views, switching between views, and simultaneous streaming of the mannequin's vital signs.
- 2.3.7.8 The control room must be of sufficient size to accommodate all staff involved in the running and direction of the simulations. Where a single control room is used for two 'clinical' rooms, there should be circulation space as well as sufficient space to seat all personnel. For example, a dedicated control room for one 'clinical' room should be approximately 15 m². A single control room should be approximately 9 m².
- 2.3.8 The clinical simulation rooms should represent a contemporary working environment for ANZCA trainees including many of the visual cues expected in an operating theatre such as surgical instruments and drapes, overhead lights, trolleys such as the anaesthesia trolley and ancillary equipment such as ultrasound. Particular attention should be paid to the provision of contemporary anaesthesia equipment such as difficult airway trolleys and emergency carts or boxes including cognitive aids to manage selected crises. The anaesthesia machine should be a contemporary model in common use Australia and New Zealand. Airway equipment should include a variety of supra-glottic devices, video-laryngoscopes and video or fiberoptic bronchoscopes.
- 2.3.9 Clinical simulation rooms and equipment must meet the highlighted requirements specified in the ANZCA professional documents listed below. The size of one clinical room needs to be at least as large as a procedural room as per Australasian Healthcare Facility Guidelines. A procedural room is approximately 35 m², a small operating theatre is 50 m² and a hybrid operating room is 75 m². The other simulation clinical room should be at least as large as a resuscitation bay, i.e. minimum of approximately 25 m².
- 2.3.9.1 [PS04 Recommendations for the Post-Anaesthesia Care Unit](#) – the simulation area should substantially align with PS04. It is not necessary to have more than one recovery bed space but the equipment and monitoring available should reflect what is found in a contemporary PACU. The staffing and management criteria provide a guide for consideration when tailoring simulations to local contexts.
- 2.3.9.2 [PG18 Recommendations on Monitoring During Anaesthesia](#)
- 2.3.9.3 [PG28 Guideline on Infection Control in Anaesthesia 2025](#) – suitable personal protective equipment must be available for participants. This includes gloves, gowns, hats, masks, respirators and face shields or other protective eyewear.
- 2.3.9.4 [PS54 Minimum Safety Requirements for Anaesthetic Machines for Clinical Practice](#)

2.3.9.5 [PS55 Recommendation of Minimum Facilities for Safe Administration of Anaesthesia in Operating Suites or Other Anaesthetising Locations](#)

2.3.9.6 [PG56 Guideline on Equipment to Manage Difficult Airways](#)

2.3.10 While medication handling and security must comply with local regulatory requirements, the form of medication presentation is at the discretion of the Supervisor of EMAC.

2.3.11 All aspects of workplace health and safety such as infection prevention, sharps handling and electrical safety that apply to the acute care setting must be observed in the simulation environment.

2.4 Other facilities

The following must be provided:

2.4.1 Change rooms and washrooms.

2.4.2 Theatre attire including hats and masks.

2.4.3 Facilities for secure storage of participants' valuables.

2.4.4 Storage area for equipment and teaching materials enabling the assembly of props before each course and a smooth transition between activities.

2.4.5 Meals area (preferably separate from seminar areas). This should accommodate all participants and instructors at one time and have tea and coffee-making facilities.

2.5 Equipment and Environment

2.5.1 The equipment and environment must be capable of meeting educational goals described in the *EMAC Instructors' Manual*. Equipment must be appropriately maintained and there must be a capital expenditure plan for updating and replacing old equipment.

2.5.2 The environment and the equipment should provide the cues present in a clinical environment with sufficient fidelity to consistently evoke work as plausibly might be done by participants in their everyday practice. The final determination of whether this requirement is met in a simulation facility can only be made by one who does the work, in this case an anaesthetist. A newly built facility must be designed with this objective in mind requiring consultation with anaesthetists and anaesthesia nurses throughout the design phase. This does not require the replication of every detail but the requirements outlined below are necessary for accreditation standards to be met.

2.5.3 The mannequins should enable participants to interact and assess physiological status and the effect of interventions in sufficient detail to permit decision-making and guide actions.

2.5.4 Monitored vital signs must be able to be varied and displayed in response to participant actions in real time without delay.

2.5.5 Two patient simulators and the range of training devices and clinical equipment for the skill stations are essential. At least one of the patient simulators must have the following capabilities:

Airway and Breathing

2.5.6 Anatomy is recognisable from upper airway to carina including external landmarks such as cricoid cartilage.

2.5.7 Permits ventilation by bag and facemask.

2.5.8 Allows placement of a supraglottic airway device.

2.5.9 Permits endotracheal intubation with direct laryngoscopy and video-laryngoscopy.

- 2.5.10 Allows continuous spontaneous respiratory rates over the adult range.
- 2.5.11 Chest excursion with spontaneous or assisted ventilation.
- 2.5.12 Asymmetric movement of chest wall, automatically if mannequin is intubated endobronchially
- 2.5.13 Permits mechanical ventilation using an anaesthetic ventilator.
- 2.5.14 Provides appropriate exhaled volumes during ventilation.
- 2.5.15 Demonstrates variable left and right airway resistance and lung compliance with realistic airway pressures on manual and controlled ventilation modes.
- 2.5.16 Allows breath sounds to be generated that allow the detection and verification of effective lung ventilation on each side and the presence of bronchospasm.

Cardiovascular system

- 2.5.17 Generates central and peripheral pulses that are palpable and correspond to patient clinical status.
- 2.5.18 Permits external defibrillation, cardioversion and pacing consistent with current clinical guidelines.

Other

- 2.5.19 Capable of blinking and having eyes open or closed according to clinical status.
- 2.5.20 Pupils have variable size.
- 2.5.21 Vocalisation of good audio quality (see also 2.3.6.5 regarding patient voice).

Monitoring

- 2.5.22 The simulator should be able to interface with standard clinical monitors (or a replicated equivalent) and produce signals that are consistent with usual clinical practice. The monitoring should comply with [PS18 Recommendations on Monitoring During Anaesthesia](#). The patient monitor should represent parameters consistent with the layout of a contemporary monitor configured for anaesthesia care.
- 2.5.23 Performs automatic functions of monitoring including NIBP cycling, and alarms if outside limits.
- 2.5.24 Displays simulation of inhaled and exhaled carbon dioxide production with a degree of accuracy in value and waveform, including absence in oesophageal intubation.
- 2.5.25 Displays simulated:
 - 2.5.25.1 Pulse oximetry waveform and values
 - 2.5.25.2 NIBP, arterial pressure, CVP, CO, PAP waveform and values.
 - 2.5.25.3 Heart rate and electrocardiography (ECG) including sinus rhythm, ventricular tachycardia (both pulsatile and pulseless), ventricular fibrillation, and acute cardiac ischaemia
 - 2.5.25.4 Variable temperature values
 - 2.5.25.5 Inspired and expired oxygen values appropriate to the scenario
 - 2.5.25.6 Automatic disconnection/ventilator failure alarms for airway pressure of CO₂
- 2.5.26 Allows participant to adjust volatile concentrations and display levels on patient monitor.
- 2.5.27 The following clinical signs and states or monitor parameters must be conveyed to participants in a timely manner by an embedded staff member if they are not automatically visible to a participant.
 - 2.5.27.1 Skin colour, warmth and perfusion
 - 2.5.27.2 Muscle tone and movement
 - 2.5.27.3 Respiratory effort and pattern

2.5.27.4 Grade of laryngeal view

2.5.27.5 Seizure activity or fasciculations in response to medication or physiological state

2.5.27.6 Depth of neuromuscular blockage and qualitative or quantitative response to nerve stimulation

2.5.27.7 Depth of anaesthesia, e.g. BIS, entropy value

Equipment, environment & monitoring summary

2.5.28 The standards outlined above cannot be met by any one, single mannequin. Instead, a combination of mannequins and/or workarounds are required such as incorporation of technology like a lung solution (e.g., Ingmar ASL 5000) or by embedded staff providing specific cues. A list of workarounds is maintained by the EMAC subcommittee and is available to EMAC Supervisors online via Learn@ANZCA. Supervisors are encouraged to share innovations that improve the functionality of the equipment or mannequin with the EMAC SC.

2.5.29 For clarity, the standards outlined above may be met by a combination of mannequins including but not limited to the METI HPS, and Laerdal SimMan 3G with or without an Ingmar ASL lung.

2.5.30 Centres wishing to use alternate mannequin combinations should consult the EMAC Subcommittee for advice regarding how to demonstrate suitability via the use of technology or workarounds.

2.6 Courses

2.6.1 The course must meet the aims and objectives as outlined in the *EMAC Instructors' Manual*. For further information email: emac@anzca.edu.au. In particular, EMAC courses must be delivered in a psychologically safe and supportive learning environment that promotes mutual respect between participants and faculty.

2.6.2 At the time of completing the EMAC course, ANZCA trainees must have completed Introductory Training.

2.7 Quality assurance and Improvement

External Faculty Peer Reviewers

2.7.1 On a minimum of one course per year, each centre should host a visiting instructor as **External Faculty Peer Reviewer**. External Faculty Peer Reviewers must be EMAC Supervisors or Convenors, or senior Full EMAC Instructors on a trajectory towards acting as Convenor. The purpose of inviting external faculty is to assist centres to share ideas and innovations and so that benchmarking and consistency results. A written report, using the external peer review report template on Learn@ANZCA, must be provided to the Supervisor of EMAC. This report is to be submitted as part of the Annual Report.

2.7.2 The External Faculty Peer Reviewer role is distinct from supplemental faculty from other centres that may be rostered to instruct on a course. Supplemental faculty may be Associate, Assistant or Full Instructors. There is no requirement for Supplemental faculty to provide a report.

2.7.3 External Faculty Peer Reviewers participating in the ANZCA and FPM Continuing Professional Development (CPD) Program are eligible to claim CPD hours.

Supplemental external faculty

2.7.4 Centres are strongly encouraged to occasionally utilise external faculty, e.g. instructors on a trajectory towards becoming a Convenor or a Full Instructor. The inclusion of supplemental external faculty provides an invaluable independent lens for quality assurance and quality improvement, enhancing and aligning with best practice standards.

Professional development

2.7.5 The centre will provide a credible professional development program for simulation instructors.

Documentation including Annual Report

2.7.6 Participants must receive written notification of their satisfactory completion. The certificate of completion must include the date of course completion.

2.7.7 Participants are asked to complete a standardised evaluation form for all modules.

2.7.8 A summary of the course evaluation forms must be available to accreditation teams.

2.7.9 The Supervisor of EMAC must submit an **Annual Report** to the EMAC Course Subcommittee (via emac@anzca.edu.au). The annual report should summarise the past year of EMAC activities and outcomes. As a minimum this will include:

2.7.9.1 The number of attendees.

2.7.9.2 External Faculty Peer Reviewer report once per year.

2.7.9.3 Names and status of EMAC course Conveners and Instructors for the centre.

2.7.9.4 Faculty development activities.

2.7.9.5 A summary of the course evaluation forms.

2.7.9.6 Other important feedback including the number of times a simulator fails resulting in a delay or alternate educational activity being enacted.

2.7.9.7 Notification of outcomes of innovations trialed (see below for more details).

2.7.9.8 Centre difficulties and material changes in status since last accrediting visit.
Documentation of regular credentialing of Instructors will assist in ensuring that an appropriate mix of Instructors is present on each course.

2.7.9.9 A summary of the data collected in the annual reports is shared with the Supervisors of EMAC.

Innovations

2.7.10 Trialling of innovations is encouraged; all centres may benefit from techniques or tips piloted in other centres. Successful innovations, such as new ways to achieve the same goal, may also be useful when revising the EMAC course content.

2.7.11 All innovations are to be overseen and approved by the SOE.

2.7.12 Innovations are to be included in the annual report so they can be shared with other EMAC centres via the Supervisors of EMAC Network.

2.7.13 Examples of innovations that can be trialed without prior discussion with the EMAC Subcommittee include minor changes to presentations, re-sequencing of course activities, changes in patient names and personal stories to match local cultural context or introduction of cloth caps with names.

2.7.14 If the innovations involve dropping of content to make way for a new activity, advice should be sought from the EMAC Subcommittee prior to implementation.

2.7.15 If the innovations include creation of new content, e.g. presentations covering new topics, an outline of proposed materials must be submitted in advance to the EMAC Subcommittee. The EMAC Subcommittee will review the materials and seek peer review as required.

- 2.7.16 If the new content/materials are approved for trialing, an evaluation must be submitted to the EMAC Subcommittee at the conclusion of the trial period. This is to ensure materials can be made available to other centres as an option and the content can be included in future course revisions.

Scheduling of courses

- 2.7.17 Accredited centres must conduct a *minimum of two EMAC courses* per year.
- 2.7.18 Accredited centres are encouraged to cooperate in the scheduling of courses so that a calendar of courses is developed and advertised for each.
- 2.7.19 Centres should refer to the ANZCA website to ensure courses do not conflict with key events such as examinations and education meetings.

2.8 Accreditation of simulation centres for delivery of the EMAC course

Scope of accreditation

ANZCA accredits simulation centres to deliver the EMAC course against a set of standards (detailed above). The application process to become an accredited simulation centre includes self-assessment of the simulation centre against the EMAC standards followed by a site inspection by ANZCA accreditation visitors.

- 2.8.1 EMAC accreditation applies to the combined capability of the simulation facility and its staff, the ANZCA appointed Supervisor of EMAC and the EMAC faculty. Accreditation is therefore not an approval of the physical facility alone. The Supervisor of EMAC has overall responsibility for the quality of EMAC course delivery at the centre, including ensuring that sufficient appropriately trained and credentialed faculty are available.

Initial and provisional accreditation

The process is as follows:

- 2.8.2 The simulation centre requests the application documentation for provisional accreditation by contacting emac@anzca.edu.au
- 2.8.3 Complete a self-assessment against the standards listed above (Refer to 2.1 – 2.7).
- 2.8.4 The application is *jointly* submitted to ANZCA by the simulation centre Director/Manager and the EMAC Supervisor (or intended EMAC Supervisor).
- 2.8.5 The application is reviewed by the Chair, EMAC subcommittee, with the outcome being:
a) provisional accreditation granted for 6 months, or b) provisional accreditation not granted.
- 2.8.6 The simulation centre is granted provisional accreditation to run *one* EMAC course no later than 6 months after the granting of provisional accreditation - this enables the simulation centre to prepare for the first course which is when the inspection occurs.
- 2.8.7 The EMAC program at the centre is assessed against the relevant requirements of this Handbook and the EMAC Instructors' Manual by an ANZCA accreditation team. Following the site visit, the accreditation visitors will submit a report and recommendation to the EMAC Subcommittee.
- 2.8.8 The EMAC Subcommittee will consider the accreditation report and recommendation and may:
- 2.8.8.1 approve full accreditation for a period of up to five years
 - 2.8.8.2 approve conditional accreditation for a specified shorter period, subject to corrective actions and reporting requirements

2.8.8.3 decline accreditation.

2.8.9 The simulation centre may then schedule and advertise further courses.

2.8.10 There is an annual license fee payable by the Centre to ANZCA for running the course/s.

2.8.11 The simulation centre sets their own fee for the course.

Ongoing accreditation

2.8.12 Accredited centres must conduct a *minimum of two full EMAC courses* per calendar year to maintain accreditation.

2.8.13 Ongoing accreditation is contingent upon satisfactory receipt of Annual Reports.

2.8.14 Material changes such as facility re-location, changes in leadership or centre difficulties may trigger an accreditation review.

Reaccreditation

2.8.15 Centres seeking continuation of accreditation must undergo reaccreditation, including a site inspection, before expiry of the current accreditation period. Full accreditation is granted for a maximum of five years.

2.9 Appointment of EMAC accreditation visitors

Visitors are either councillors, members of the EMAC S/C or appointed by the EMAC S/C. Appointment of visitors will be based on the following criteria:

2.9.1 Advanced communication skills including ability to interact with senior colleagues and administrators.

2.9.2 Knowledge of the EMAC Handbook, in particular EMAC Accreditation Standards, as well as the ANZCA training program and relevant ANZCA policy.

2.9.3 Experience with the delivery of the EMAC course.

2.9.4 Experience with the organisation and governance of simulation centres.

2.9.5 Relevant training/experience/attendance at a visitors' workshop.

2.9.6 Ability to recognise and manage potential bias and conflicts of interest.

2.9.7 Willingness to commit to on-site inspections.

2.9.8 Specific expertise, where relevant.

2.10 Initial appointment will require the presentation of a brief CV and covering letter outlining relevant experience, skills and attributes.

2.11 A conflict of interest statement, updated annually, must also be provided at the time of initial appointment.

2.12 Initial appointment will be for three years. Visitors may be reappointed every three years, typically for a maximum of 12 years.

2.13 Accreditation visitors and participants of the ANZCA Continuing Professional Development (CPD) Program are eligible to CPD hours.

Section 3: Roles

3.1 Supervisor of EMAC

Appointment

- 3.1.1 Supervisors of EMAC must hold a current FANZCA or other equivalent qualification acceptable to ANZCA Council.
- 3.1.2 Supervisors of EMAC must be a current, Full EMAC Instructor throughout their appointment as Supervisor of EMAC.
- 3.1.3 Supervisors of EMAC must have acted as Convener a minimum of three times.
- 3.1.4 Supervisors of EMAC are recommended for appointment by the EMAC Course Subcommittee and approved by the Education, Executive Management Committee (EEMC).
- 3.1.5 Prospective Supervisors of EMAC should complete the application for appointment template available from [ANZCA](#). The application should include a letter from the prospective Supervisor addressed to the Chair of the EMAC Subcommittee. This letter should outline how the applicant addresses the criteria below, and should be signed by two ANZCA Fellows including at least one Full EMAC Instructor. A current CV of the nominee is also required.
- 3.1.6 Appointment of Supervisors of EMAC will take into account the following factors
 - 3.1.6.1 Content expertise and experience in simulation
 - 3.1.6.2 Minimum of two years' experience as a Full EMAC Instructor and be a current Full EMAC Instructor throughout their appointment.
 - 3.1.6.3 Content expertise and experience in medical education
 - 3.1.6.4 Knowledge of the ANZCA or HKCA training programs, including current or recent experience of ANZCA or HKCA supervisory roles e.g. WBA assessor
 - 3.1.6.5 Have acted as an EMAC Convenor for a minimum of three full EMAC courses.
 - 3.1.6.6 Should a candidate not meet all criteria at the time of application, they may still be nominated. The EMAC subcommittee will make a case-by-case decision based on the applicant's CV or experience.
- 3.1.7 Typically, there is one Supervisor of EMAC for each accredited simulation facility. However, by exception, and with the approval of the subcommittee, appointment as Co-Supervisor of EMAC may be requested.
- 3.1.8 The term of the appointment for Supervisors of EMAC will be for three years up to a maximum of 12 years on approval by the EMAC Subcommittee.
- 3.1.9 A Supervisor of EMAC Agreement form must be signed at the time of initial appointment.

Duties

- 3.1.8 The Supervisor of EMAC has overall responsibility for EMAC courses run at their centre and for the recommendation of Associate, Assistant and Full EMAC Instructors to the EMAC Course Subcommittee.
- 3.1.9 The Supervisor of EMAC also has responsibility for the preparation and submission of the annual report to the EMAC Course Subcommittee.
- 3.1.10 Refer to the [Supervisor of EMAC guidelines](#) for further information on responsibilities.

Maintenance of appointment

- 3.1.11 Re-appointment is on the basis of the respective Supervisor of EMAC meeting their duty requirements listed in the above items 3.1.8, 3.1.9 and 3.1.10.
- 3.1.12 The Education Unit will contact the Supervisor and invite them to sign a renewed agreement every three years.

- 3.1.13 The Supervisor of EMAC must write to the Chair of the EMAC Subcommittee in advance of their planned resignation to enable sufficient time to seek approval for the appointment of the new Supervisor.
- 3.1.14 Supervisors of EMAC must have acted as **External Faculty Peer Reviewer** at least once in a different region or country other than their nominated 'home' simulation centre, within three years of initial appointment.
- 3.1.15 For each reappointment period, the SOE must act as External Faculty Peer Reviewer (in a different region or country) at least once within every three-year period thereafter.

Exception requests and special consideration

- 3.1.16 On occasion the Supervisor of EMAC may request exceptions or special consideration if elements of EMAC course delivery (e.g., equipment, facilities, instructors, participants), are not fully aligned with EMAC accreditation standards. These requests should be made to ANZCA via emac@anzca.edu.au and a response will be provided following consultation with the appropriate ANZCA committee. ANZCA reserves the right to decline requests and make decisions that ensure the EMAC Course is not compromised and that no participant is inadvertently disadvantaged. All requests will need to be made on an individual basis.

3.2 Full EMAC Instructor

Appointment

- 3.2.1 Full EMAC Instructors are required to:
 - 3.2.1.1 Hold FANZCA or other equivalent qualification acceptable to ANZCA Council and be practicing clinical anaesthesia currently or within the past two years.
 - 3.2.1.2 Have fulfilled all Assistant EMAC Instructor criteria. If an Instructor qualifies for both Full and Assistant positions at the same time, their Supervisor of EMAC cannot submit both applications at the same time – an Instructor needs to be appointed as Assistant first, and to fulfil Assistant Instructor duties until being nominated separately as a Full Instructor.
 - 3.2.1.3 Provide evidence of completion of a simulation instructor course pre-approved by the EMAC Course Subcommittee.
 - 3.2.1.4 Attend and instruct on at least two full EMAC courses at the intended 'home' EMAC centre. If instructors wish to instruct on additional courses, it is recommended that consideration be given to instructing at an external centre.
 - 3.2.1.5 Obtain a satisfactory evaluation from the EMAC Supervisor, or Convener, using a transparent and valid process.
 - 3.2.1.6 Have a thorough knowledge of the EMAC course content, aims and learning objectives for each module.
 - 3.2.1.7 Have sufficient content knowledge and skill to facilitate educational activities including debriefing, teaching a skill, running a problem-based learning discussion session.
 - 3.2.1.8 Be approved by the EMAC Course Subcommittee on recommendation of the Supervisor of EMAC. The nomination form for the Supervisor of EMAC to complete is downloadable from the ANZCA [website](#).

Duties

- 3.2.2 Full EMAC Instructors may instruct on an EMAC course without supervision and are eligible to accept the roles of EMAC Convener at the discretion of the EMAC Supervisor.

3.2.3 Full EMAC Instructors are expected to foster a safe and supportive learning environment with mutual respect between learners and instructors, in accordance with the guidance offered in the introduction to the *EMAC Instructors' Manual*.

Maintenance of appointment

3.2.4 Requirements for ongoing experience:

3.2.4.1 Instruct on all modules of the EMAC course at least once per year.

3.2.4.2 It is recommended that, once every three years, at least one full course is taught at a different centre to the 'home' centre.

3.2.4.3 After an absence of greater than one year, Instructors must instruct as an Assistant EMAC Instructor for at least one full course.

3.2.4.4 After instructing on one full course as Assistant Instructor, Full status may be restored at the discretion of the Supervisor of EMAC noting that more than one full course may be required depending on duration of absence.

3.2.5 Participation in the ANZCA Continuing Professional Development Program or equivalent.

3.2.6 Full instructors should be no more than two years post retirement from clinical anaesthesia.

3.3 Assistant EMAC Instructor

Appointment

3.3.1 Assistant EMAC Instructors are required to:

3.3.1.1 Except where appointed under 3.3.1.3, hold FANZCA or other equivalent qualification acceptable to ANZCA Council and be practising clinical anaesthesia currently or within the last two years.

3.3.1.2 Provisional fellows may apply if the provisional fellow is undertaking a Medical Education or Simulation Fellowship. The provisional fellowship should offer at least six – twelve months of 0.5FTE training in education or simulation.

3.3.1.3 Regions with substantial numbers of Rural Generalist Anaesthetists, and consequently, substantial numbers of GP anaesthetist EMAC participants, may consider appointing GP anaesthetists as Associate Instructors, or, on a case-by-case basis, as Assistant Instructors if they have specific, simulation-based training or human factors expertise. Each centre may have no more than one GP anaesthetist faculty member on each course.

3.3.1.4 Completion of a pre-approved simulation instructor course is desirable but not essential. However, a pre-approved course must be completed before progression to Full Instructor.

3.3.1.5 Provide evidence of appropriate training in teaching technical skills and drills either as part of the Scholar Role or via other means, for example the ANZCA Educators Program.

3.3.1.6 Submit the specified application form, including a completed referee report from the head of department in which the applicant works, to the Supervisor of EMAC at the chosen EMAC course center.

3.3.1.7 Be approved by the EMAC Course Subcommittee on recommendation of the Supervisor of EMAC. The nomination form for the Supervisor of EMAC to complete is downloadable from the ANZCA website.

3.3.1.8 All EMAC Instructors are required to nominate a 'home' base (EMAC Simulation Centre) where their Supervisor of EMAC is located and where their administration details are managed. Instructors may instruct at other centres in addition to their home base; this is in fact encouraged.

Duties

- 3.3.2 Assistant EMAC Instructors are qualified to instruct on an EMAC course with supervision by a Full EMAC Instructor. After each EMAC course, Assistant EMAC Instructors will receive formal feedback regarding their performance from the course Convener.
- 3.3.3 Assistant EMAC Instructors are expected to foster a safe and supportive learning environment with mutual respect between learners and instructors, in accordance with the guidance offered in the introduction to the *EMAC Instructors' Manual*.

3.4 Associate EMAC Instructor

Appointment

3.4.1 Associate EMAC Instructors are required to:

3.4.1.1 Hold an appropriate qualification such as:

3.4.1.2 a) FANZCA or other equivalent qualification acceptable to ANZCA Council, but without the need to have been practising independent clinical anaesthesia within the past two years.

OR

3.4.1.3 b) Non-FANZCA, which may include those with appropriate knowledge and skills from other medical specialties, including Emergency Medicine and Rural Generalist Anaesthesia, or relevant fields of endeavour.

3.4.1.4 Submit the specified application form, including completed referee report and CV, to the Supervisor of EMAC at the chosen EMAC course centre.

3.4.1.5 Be approved by the EMAC Course Subcommittee on recommendation of the Supervisor of EMAC. The nomination form for the Supervisor of EMAC to complete is downloadable from the ANZCA website.

3.4.1.6 Instructors transitioning from Full to Associate status due to more than two years post-retirement from clinical practice should apply for Associate Instructor status using the application process described above.

Duties

- 3.4.2 Associate EMAC Instructors may instruct on EMAC courses in a super-numerary relationship with a Full EMAC Instructor.
- 3.4.3 Associate EMAC Instructors are expected to foster a safe and supportive learning environment with mutual respect between learners and instructors, in accordance with the guidance offered in the introduction to the *EMAC Instructors' Manual*.

Maintenance of appointment

3.4.4 Requirements for ongoing experience:

3.4.4.1 Associate EMAC Instructors are appointed for up to three years.

3.4.4.2 After three years, associate Instructors must reapply to maintain their Associate EMAC Instructor status.

3.4.4.3 There is no requirement for recency of clinical practice for Associate instructors.

3.5 EMAC Course Convener

Appointment

3.5.1 The EMAC Course Convener must be a Full EMAC Instructor who has taught on every module as a Full Instructor. The Convener is appointed locally by the Supervisor of EMAC.

Duties

- 3.5.2 The EMAC Course Convener must be present for the duration of the course they are convening and has responsibility for its overall organisation and the approval of documentation following successful completion of the EMAC course by participants.
- 3.5.3 An EMAC Convener is encouraged to act as an External Faculty Peer Reviewer at least once every three years.

Section 4: Pre-Approval of simulation instructor courses

4.1 Generic simulation instructor courses suitable for EMAC instructors must be prospectively approved by the EMAC subcommittee according to the requirements detailed in this Handbook at item 4.6.

4.2 To apply for initial approval as an EMAC pre-approved instructor course provider, organisations must submit a completed application using the template available on request by contacting [EMAC](#). The application should detail how the proposed course meets each of the required learning outcomes, along with a comprehensive course outline, faculty qualifications, and delivery format. Applications should be submitted via email to [EMAC](#) at least four months prior to the intended first course delivery date.

4.3 Successful applications will receive pre-approval status for three years from the date of approval. During this period, any substantive changes to course content, structure, or leadership must be reported to the EMAC Subcommittee via [EMAC](#) for advice. It may be necessary to submit a revised application to the EMAC subcommittee for re-approval.

4.4 At the end of the three-year approval period, a re-application, using the re-approval template, should be submitted to the EMAC subcommittee at least four months prior to the approval expiration date.

Course contents

- 4.5 As a guide, a course should comfortably cover the required learning outcomes over two days. An EMAC pre-approved instructor course may be longer. The course may be delivered in hybrid or modular form.
- 4.6 To ensure instructors are well-equipped for EMAC courses, EMAC pre-approved instructor courses have the following minimum requirements:
- 4.6.1 The total active learning time should be a minimum of 16 hours.
 - 4.6.2 Minimum duration of debriefing components: 8 hours addressing debriefing instruction that provides opportunities for practice and coaching.
 - 4.6.3 Delivery modes: a minimum of 8 hours of face-to-face instruction is required. Additional components may be delivered online.
 - 4.6.4 The course provider must ensure that the EMAC pre-approved instructor course is facilitated by faculty who are suitably skilled, experienced and qualified to deliver the contents of the course. The facilitator should preferably have medical education experience and/or credentials.
- 4.7 A list of learning outcomes to be addressed by generic simulation instructor courses is listed in the Appendix.

Section 5: Governance

5.1 EMAC course subcommittee

5.1.1 The EMAC course and accreditation of centres is governed by the Effective Management of Anaesthetic Crises (EMAC) Course Subcommittee. The EMAC Course Subcommittee is responsible for accreditation processes including the monitoring of Simulation Centres and reports to the Education, Executive Management Committee (EEMC) on matters pertaining to the EMAC course.

5.1.2 Refer to the [EMAC Course Subcommittee terms of reference](#) for further information.

5.2 Supervisor of EMAC network

5.2.1 The Supervisors of EMAC Network provides a forum for the Supervisors of EMAC and EMAC Course Subcommittee to collaborate, share, discuss and advise on challenges faced relating to the EMAC course.

5.2.2 Refer to the [Supervisor of EMAC Network terms of reference](#) for further information.

Section 6: Related Documents

6.1 The *Effective Management of Anaesthetic Crises (EMAC) Course Participants' Manual*, available via emac@anzca.edu.au and Learn@ANZCA.

6.2 The *Effective Management of Anaesthetic Crises (EMAC) Instructors' Manual*, available via emac@anzca.edu.au and Learn@ANZCA.

Section 7: Fees

7.1 Participant fees for EMAC Courses are set locally by each individual simulation centre.

7.2 The annual EMAC Course licence fee will be confirmed on an annual basis following the November Council meeting. The confirmed fee will subsequently be communicated to each simulation centre. For enquiries, please contact emac@anzca.edu.au.

7.2.1 Further information on fees and payment process can be found on the EMAC Course [web page](#).

Section 8: Contact ANZCA

For queries about the EMAC course please contact the ANZCA Education Unit:

Email: emac@anzca.edu.au

Telephone: +61 3 9093 4947

Post: Australian and New Zealand College of Anaesthetists

ANZCA House

630 St Kilda Road

Melbourne Victoria 3004

Australia

Change control register

<u>Version</u>	<u>Author</u>	<u>Approved by</u>	<u>Approval date</u>	<u>Sections Modified</u>
1.0	A Tsismelis	ETAMC ETAEC	Feb 2017 Feb 2017	Creation

2.1	B Peace	ETAMC	July and Aug 2017	Item 3.1: Supervisor of EMAC appointment process and duties slightly modified. Various small changes throughout.
2.2	B Peace	EEMC		Links to forms, Full Instructor requirements fleshed out. Exception requests added. Further minor changes.
2.3	B Peace	EEMC	June 2018	Minor changes to Supervisor of EMAC, Full Instructor and Assistant Instructor requirements.
2.4	B Peace	EEMC	Aug 2018	Recommended staffing matrix added to 2.1 Staffing Requirements
2.5	B Peace	EEMC	January 2019	Item 3.1.4 + 3.1.7: Supervisor of EMAC role Item 3.3.1.5: Assistant EMAC Instructor Item 4.3.2 moved Item 7: Fees clarified
2.6	M Kerr, BPeace	EEMC	April 2019 TBC	2.1: Accreditation standards and 2.7: Simulation Centre governance
2.7	B Peace			2.8: Accreditation of simulation centres 2.9: Appointment of EMAC Accreditation Visitors
2.8	B Peace		November 2019	Various small changes throughout. Addition of 3.1.7.6 Deletion of 5.1.2
				Addition of Maintenance of appointment for Supervisor of EMAC (Item 3.1) Content page update
2.9	B Peace / C McIntosh	EEMC	April 2021	3.4: Appointment of associate EMAC instructors 4: Approval of simulation instructor courses
2.10	B Peace / C McIntosh	EEMC	November 2021	3.1.4 SOE appointment criteria (external faculty)
3.0	C McIntosh	EEMC	August 2026	Review of accreditation standards and subsequent review of handbook; substantive changes to equipment and environment standards, and numerous minor changes clarifying instructor, supervisor, peer review faculty and accreditation visitor appointment processes, changes to the contents of the EMAC Annual Report, and revised pre-approval of instructor courses including new learning outcomes and process for seeking approval and re-approval.

Appendix: EMAC pre-approved instructor course learning outcomes

By the end of the EMAC pre-approved instructor course, participants will be able to:

1. Build and maintain a psychologically safe learning environment.
2. Apply contemporary educational theories and principles to simulation-based medical education, including adult and learner-centred education principles, socio-cultural learning theories and cognitive load theory.
3. Practise critical thinking and reflection as practitioners and facilitators of learning.
4. Encourage critical thinking and reflection of participants.
5. Compare and contrast how different teaching modalities support learning outcomes.
6. Identify behavioural markers of good and poor performance of teams as well as individual, portable non-technical skills using a framework such as principles of Crisis Resource Management.
7. Identify concrete performance examples in simulated clinical scenarios to utilise during debriefing.
8. Rehearse with the opportunity for feedback the following debriefing techniques to explore and close performance gaps of participants:
 - a. Directive feedback
 - b. Learner self-assessment, e.g. use of plus delta
 - c. Debriefing with good judgment using advocacy-inquiry pairings
 - d. Effective use of co-debriefing strategies.
9. Facilitate problem-based learning discussions and small group learning using techniques including but not limited to 'pause and discuss' (or pause and review) simulations.
10. Practise running key elements of a scenario including:
 - a. participant briefing
 - b. direction of flow
 - c. providing direction to console operators and embedded participants.
11. Apply strategies to address challenging participant behaviours (dominant, reluctant, reticent, upset, disengaged) that may arise during simulations or debriefings.
12. Recognise the different skills, roles and responsibilities of the simulation team:
 - a. Course leader
 - b. Scenario director
 - c. Console operator
 - d. Embedded participant such as other
 - e. Debriefers (primary and secondary)
 - f. Acting roles including patient voice.
13. Describe how cognitive biases and performance shaping factors such as stress can impair performance in technical tasks, decision-making and leadership.
14. Discuss mitigating strategies for performance shaping factors such as stress including use of cognitive aids.

For the purposes of applying for pre-approval as an EMAC instructor course, the following learning outcomes are not essential. We note, however, that these are foundational simulation instructor concepts, and therefore encourage these learning outcomes to be included in the course.

15. Design, deliver and debrief a scenario.