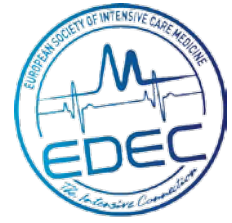




*The Intensive Connection*



# European Diploma in advanced critical care EchoCardiography (EDEC)

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## *Information and check list for candidates*

The accreditation process is run as a service for intensivists practising echocardiography. The accreditation process requires that the candidate shall pass a written and practical examination and submit a logbook within a continuous 24-month period. The accreditation process is involved with transthoracic (TTE) and transoesophageal echocardiography (TEE) because the two approaches are complementary. The whole accreditation process is in English.

## **Prerequisites to enrol for EDEC**

### *1. Identify a “local” mentor/supervisor*

#### **1.1. Supervisor**

Each candidate for accreditation must enroll with a suitably qualified supervisor who undertakes to train, supervise and to arrange visits to other centres if there are difficulties obtaining an adequate case-mix locally. The supervisor must be approved by the EDEC Committee. Any practitioner with full TTE or TOE accreditation as awarded by recognised national or international intensive care, cardiology, anaesthesia or emergency medicine body (see appendix A) can apply to be an EDEC Supervisor. Supervisors wishing to explore the possibility of equivalence should contact the secretariat for details. The supervisor should be actively performing and interpreting echocardiography in a critical care unit and take part in appropriate continuing professional development.

The Supervisor is the responsible person who validates the logbook and guarantees to the EDEC Committee the competence of the individual seeking to attain the diploma. A printed and signed document will be provided to this effect (see appendix B). The Supervisor should be identified at the time the applicant registers with ESICM and where possible, approved by the appropriate EDEC national representative. The names and contact details of certified supervisors in a candidate’s region will be made available on the ESICM website.

The Supervisor is responsible for ensuring the logbook is completed before submission to EDEC Committee. The Supervisor will meet with the learner and sign off the logbook as the learner’s original work. The Supervisor also acts as the guarantor to ESICM that the learner possesses the appropriate knowledge and competence in critical care echocardiography as defined by the EDEC Committee.

The Supervisor may act in co-operation with a local mentor who works with the candidate and helps him to achieve desired standard of echocardiographic image acquisition and interpretation. The Supervisor should ensure that any mentors have the appropriate skills and competence to facilitate the learner in their training programme.

#### **1.2. Mentor**

A Mentor is an individual who may not have the full range of critical care echocardiography skills and interpretation but is one who can provide useful technical or cognitive training. Mentor is a person who is easily accessible to the candidate and is the first person for contact for training. Examples may include a cardiologist, an echocardiography technician, an intensive care physician or a cardiac anesthesiologist. They can provide vital skills and knowledge training in part, without the ability to deliver the whole diploma package. The echocardiographers not graduated in medicine are welcomed to become mentors and help candidates in achieving standards of advanced critical care echocardiography.

### **1.3. Mentor and Supervisor may be the same person**

However, the supervisor must be registered with EDEC (ESICM). The Mentor would work in association with and supervised by the Supervisor. They would not be a substitute for the Supervisor and the learner would need regular contact with the Supervisor as specified above. The Supervisor would be responsible for ensuring that the Mentor was delivering an appropriate standard of training.

### ***2. Attendance at advanced courses of at least 40 points***

The number of points encompasses compulsory advanced course at ESICM annual congress (12 points) and internet-based learning (e-learning, webinars) provided that these activities are clearly mentioned as EDEC activities. The active participation of a candidate will be monitored.

After enrolment, a 24-month period starts during which the required amount of cases should be collected for the logbook. A candidate may sit the examination at any time during the 24 months once a minimum of **30 TTE** and **10 TEE** reports have been completed and confirmed. Although the examination can be sat at any time throughout the 24-month period, the mandatory ESICM course should be undertaken within the first 12 months after initiation of the accreditation process.

Accreditation will only be awarded once a candidate has successfully passed all three parts of the exam and has completed the practical assessment (logbook). A satisfactory performance at the written and practical assessment alone does not allow for “partial accreditation”. There is no bar to re-sitting the written assessment however, this will accrue extra fees to be paid to ESICM office.

### ***3. Logbook, practical part***

The logbook will be collected over a period of up to 24 months with the exam being taken at any point during this period. The logbook is structured and downloaded from the ESICM website. The completion of the logbook is expected within 2 years from enrolment during which the exam is completed. The logbook should contain a minimum of **100 TTE** clinical cases and **35 TEE** clinical cases which are reported in a consistent manner according to the suggested format. The required major pathologies are covered. A study performed for the same patient on separate occasion's counts as a separate study. As discussed above, a minimum of 40 logged studies is required prior to sitting the written examination.

The initial 40 studies will be reviewed by an expert assigned by the EDEC Committee who will provide a timely feedback to candidate and his/her supervisor. This step should provide a guidance in acquisition of appropriate echocardiography studies and prevent submission of insufficient logbooks

The logbooks will be assessed by the board of EDEC, a report will be made to the Chairman of the EDEC Committee. Borderline cases will be discussed by the Committee. A candidate may be required to provide additional echocardiographic cases if the level of performance is found insufficient.

## **Structure of the EDEC Examination**

Full details on dates and venues, and registration forms, will be circulated with the ESICM newsletter and on the ESICM website. The candidate needs to register to sit for the exam one month prior to the actual exam date. A final information letter will be sent approximately 1 week before the exam – a candidate will need to contact the certification office if the information letter has not been received by this point.

The exam consists of written theoretical part (I), practical reporting part (II) and practical part in the form of objective clinical skill exam (OSCE) performed on mannequins (III). It is necessary to pass all three parts which are scored separately, there is no compensation allowed. For example, excellent theoretical results cannot outweigh failure in the practical part.

Candidates are required to come to the Certification registration desk at least 30 minutes before the start of the exam. Candidates are requested to bring and present an ID document / passport to confirm their identity.

### ***1. Theoretical written part (I)***

This comprises 50 Multiple Choice Questions (MCQs), containing 5 true/false answers each question, with at least 5 of the questions are on the physics of ultrasound. The duration of the written part I exam is 90 minutes. Marking is based on +1 for correct answers, 0 for incorrect or unanswered questions. There will be no negative marking. The maximum possible score is 250. The exam runs on iPads with calculators available, no other electronic devices including mobiles are allowed.

### ***2. Practical reporting part (II)***

This contains 30 Single Best Answer Questions covering the syllabus (Expert Round Table on Echocardiography in ICU, published in Intensive Care Med 2014). There are 10 case studies with 3 questions per case. The video clips (TTE and TEE cases) are projected on iPads with calculators available, no other electronic devices including mobiles are allowed. The clips and loops will repeat for 6 minutes each (10 per 60 min) and will contain sufficient information to answer the questions. The total duration is 1 hour. Each question will have 4 possible answers and candidates will be asked to select the single best answer. Normal or near-normal studies may be presented. Each question is worth a 1 point giving a total of 30.

The total duration of the Part I and Part II examination is approximately 3 hours including a 20 minutes break. A proposed time is calculated as 90 minutes for Part I, 20 min break, 60 minutes for practical reporting Part II.

Once finished, the candidate is required to hand over the iPads and leave the examination room. If a candidate leaves the room before the end of the exam, she/he will have to return his/her iPad to the assessors and will not be allowed to re-enter the room nor access his/her marking sheet.

### ***3. Practical hands-on part (III, manequins)***

One-to-one Objective Clinical Skill Exam with an EDEC expert committee member using a simulator model to assess the candidate's ability to perform a trans-oesophageal echo (TEE). The candidate will receive a clinical vignette, be asked to complete a comprehensive TEE with specific questions regarding pathologies and their clinical interpretation(s). Marks will be allocated based on practical skill, image quality and interpretation. The whole exam lasts 20 minutes.

### ***4. Evaluation***

Scoring sheets of theoretical and practical parts of the exam are evaluated in ESICM Office and submitted to the EDEC Committee. Results of the examination are sent by e-mail two months after the exam. The exam sheets are analysed by computers and the results verified and checked by the Committee. The results are final and there is no appeal process. In the case of failure, the exam may be reattempted according to the following scheme:

- First attempt: The fees are included in initial price
- Second attempt: The candidate will have to pay administrative fees
- Third attempt: Again, the candidate will have to pay administrative fees

If the above conditions are not met, the candidate is requested to proceed with a new registration.

Each candidate has three attempts maximum to pass the exams, and the three attempts must be done in four years maximum from the first exam registration.

### ***5. Re-certification process***

As echocardiography skills can only be maintained by continued education and practical involvement, certification is granted for a limited period. Requirements for re-certification will be provided in the future.

## Appendix A: List of possible accreditations to allow supervisor status.

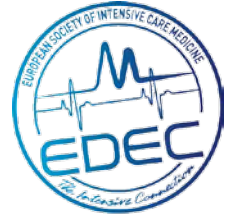
The following is not an exhaustive list and it should be anticipated that in time supervisors will be in possession of the EDEC diploma. Application by other potential supervisors can be submitted to ESICM/EDEC for consideration. Participation as teacher in recognized courses and/or publications in the domain of advanced echocardiography can be considered.

- European Society of Cardiology (ESC) TTE accreditation
- European Society of Cardiothoracic Anaesthetist (EACTA/ESC) TEE accreditation
- Any EU country cardiology specialist qualification
- United Kingdom BSE/ICS Critical Care TTE accreditation
- United Kingdom BSE/ACTA TOE accreditation
- Diploma in Diagnostic Ultrasound (DDU) Critical Care or Cardiology – Australasian Society for Ultrasound in Medicine (ASUM)
- Cardiology specialist qualification (FRACP / FCSANZ)
- American Echo Board Exam (ASCeXAM)
- Graduate Certificate in Critical Care Echo (GCCritCareEcho), University of Queensland

## Appendix B: Supervisors declaration form



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Name of EDEC Registrant:

Identification code:

Speciality and qualifications

Current Institution/training programme

Name of Supervisor

Supervisors contact details

Email:

Address:

Phone contact:

Supervisor speciality and qualifications

Supervisor institution

Logbook summary

TTE cases recorded

TEE cases recorded

Echocardiography CPD hours

I certify that [insert name] has achieved the required number of cases and hours of CPD.

I have examined his/her logbook and I can certify that [insert name] has performed all the studies themselves and that they are genuine clinical cases.

Supervisor signature

Supervisor name

**Date**