ICU specialist - Task Force guidelines of WFSICCM

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Choose between terms Intensive & Critical care medicine
- Intensive Care specialist
- Critical Care specialist
- ICU specialist
- “Intensivist”

Critical Care Medicine has become an independent discipline

Definitely multidisciplinary
WFSICCM has set up a task force to address:

“The functions, roles and responsibilities of an ICU specialist”
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Task Force - ICU Specialist

1. Who is an ICU specialist?
2. What training is required for an ICU specialist?
3. What are the competencies required?
4. What is the minimum number of months for competence?
5. Does a presence of an ICU specialist make a difference to outcomes of critically ill patients?
6. Do we need a 24 hour presence of the ICU specialist in the unit?
7. The interaction and relationship of the ICU specialist with the primary consultant.
8. In what way can services of the ICU specialist be best utilised for improved patient outcomes?
10. ICU without walls’ and the role and responsibility of ICU specialists.
Who is an ICU specialist?

- An intensivist or an ICU specialist is a medical professional trained in the field of intensive care medicine or simply a primary care physician of the ICU.

- This physician:
  - Ideally has no outpatient responsibilities and rotates with other intensivists.
  - Makes all final decisions about the care of the patients, including who is admitted and discharged.
  - Which physicians to consult, and all other aspects of care.
  - ICU care involves the assessment, resuscitation and ongoing management of critically ill patients with life-threatening single & multiple organ system failure.
  - Play a key role for protocol and procedure development.
  - They also determine the extent of patient monitoring.
  - Ensure that all procedures are carried out safely and competently.
  - Communicating both with patients and family.
  - Training and teaching junior colleagues.
  - Initiating end-of-life discussion.
Anesthesiologists & Critical Care

- Although anesthesiologists took a leadership role in the initial development of critical care in the US, critical care anesthesiologists are a reducing entity.

- However in Europe, anesthesiologists play a dominant role in CCM.

- According to the ESICM, anesthesiologists provide more than half of European intensive care.

- The annual production of anesthesia-based CCM diploma holders has remained low, averaging 50–60 per year over a 10 year period.

- In Europe, anaesthetist intensivist do not shuttle between ICU and the operating room; they essentially exclusively practise CCM.

- Globally, most of the curriculum in anaesthesia devotes only a brief period of CCM training.

_Hanson III CW, et al Anesthesiology 2001; 95:781–8_
Common Areas of CCM & other Specialties

Critical Care medicine is a medical specialty sharing knowledge, skills & attitudes.
What training is required for an ICU specialist?

- Of the 54 different programs identified in 42 countries worldwide, 37 were within the European Region; these varied in duration from 3 to 72 months.

- The structure and oversight for programs in the USA is dependent on one of 4 boards or colleges and the training within these boards varies depending on the specialty.

- In Canada, Critical Care Medicine is a subspecialty with standards and training requirements overseen by the Royal College of Physicians of Surgeons of Canada.

- ICM is now a primary specialty in Spain, ANZ, Switzerland, and the UK; France is considering a similar approach.
Certification/Diploma/Speciality in CCM

ICM as a Primary speciality
ICM as a subspeciality from a single discipline
ICM as a subspeciality from multiple discipline
ICM as a supraspeciality from multiple discipline
What training is required for an ICU specialist?

- CCM is not a primary Speciality in every country

- In countries like Spain, Australia, New Zealand and Switzerland, and the UK. CCM is a primary speciality the qualification of these specialist has never be questioned.

- Multidisciplinary accesses to CCM from different medical specialities may be beneficial by enriching the knowledge contributed by the various factions.

- CCM emerging as a subspeciality or supraspeciality field.

- In general the supraspeciality model favors the primary speciality model by being more flexible and sustainable.
Programs in the USA

The structure and oversight for programs in the USA is dependent on one of 4 boards or colleges and the training within these boards varies depending on the specialty.

For example the American Board of Anesthesiology oversees the training of Anesthesiologists and Emergency Medicine (EM) specialists.

- While this training is one year for the former after completion of Anesthesiology training
- for EM specialists it is 2 years after completion of EM training. The focus of this training is primarily directed to surgical & trauma ICUs
- Similar training for primarily surgical ICUs is a single year program is offered to interested surgeons through the American Board of Surgery after completion of surgery training
- American Board of Internal Medicine has subspecialty training in Critical Care Medicine after completion of either US or Canadian Internal Medicine examinations. These subspecialists work in all types of ICUs.
In Canada, Critical Care Medicine is a subspecialty with standards and training requirements overseen by the Royal College of Physicians of Surgeons of Canada. The training is 2 years.

One year of that training may overlap with a specialty.

Trainees can enter into critical care from Internal Medicine and all its subspecialties, Emergency Medicine, General and Cardiac Surgery or Anesthesiology and with special consideration from other specialties such as Neurosurgery.
The College of Intensive Care Medicine of Australian and New Zealand College is responsible for specialty training, which can occur after a year of post MD graduate training or after completing another specialty.

Training is generally 6 years in length.

The rest of the Oceania is generally a 1-2 year subspecialty program.
In Asia an intensivist usually obtains additional training after completing specialty training. That training may last from 6 months to over 1 year.

In India there are three training options offered by the Indian Society of Critical Care Medicine with the duration of training being 1-2 years depending on postgraduate qualifications.

The National Boards offers a 2-year structured fellowship program.

Some universities offer a 2-year DM (Doctorate in Medicine) curriculum as a post doctorate program.
What are the competencies required?

- The Competency-Based Training in Intensive Care Medicine program in Europe (CoBaTrICE) program is a Europe-based worldwide alliance of training organizations to develop a core competency for Critical Care Medicine.

- It uses consensus policies to ascertain standardization.

- The CoBaTrICE focuses on competency-based medical training and this is a continuous process under direct or indirect supervision.

- It is based on workplace-based assessment, which may include mini-clinical examination (Mini-CEX) and direct observation of procedures (DOPS).

- The CoBaTrICE program identifies the minimum criterion to test knowledge, skills and attitudes required for a physician.
Present Situation of training and certification in CCM

- Worldwide there is considerable heterogeneity (Speciality, Diploma, etc.)
- The kind of certification (Primary speciality, supraspeciality, etc.) this extends to model of training
- In some countries like Spain and Australia CCM is considered a medical speciality.
- In other countries doctors that practise in ICU's need a certification, or a diploma not always by standardised training programs and examinations.
- Similar variability is seen in acquiring skills and knowledge.
Primary Speciality

- A specific programme of acquisition of competences exists independently of training or certification in other specialities.
- Hence CCM is the base speciality and is accessed after undergraduate training.
- Primary Speciality is the only model in Spain, Australia, New Zealand and Switzerland with training Duration between 60-72 months.
- There are advantages & disadvantages with this system.
- Shortage of Intensivists.
Supraspeciality in Critical Care Medicine

- Multidisciplinary access to CCM from different medical specialities may enrich areas of knowledge & facilitate diagnostic and therapeutic skills acquired in their original fields.

- In their daily handling of critical patients CCM doctors cross the lines between specialities making them more flexible.

- Competence based training adapts better to Supraspeciality than primary speciality

- Reducing Burnouts

- Dual speciality (CCM + parent speciality) open up additional options to physicians
Does a presence of an ICU specialist make a difference to outcomes of critically ill patients?

- Who should be in charge of care of ICU patients has been a matter of debate since the ICU became an essential component of delivery of care in high risk patients.

- An intensivist-led, high performing, multidisciplinary team dedicated to the ICU is an integral part of effective care delivery in the ICU.

- Both North American and European guidelines recommend that intensivists be the most responsible physicians for the care of ICU patients.

Does a presence of an ICU specialist make a difference to outcomes of critically ill patients?

- Though most studies demonstrate positive impact of an intensivist-led ICU
  

- A recent large observational study reported negative effect that has led to some confusion
  

- The possible reason for these contradictory reports may be due to organization and operational factors such as patient-mix, patient-nurse ratio, presence of other medical personnel, having and adhering to evidence-based protocols, which can influence outcome other than having an ICU specialist.
Do we need a 24 hour presence of the ICU specialist in the unit?

The only randomized clinical trial of nighttime intensivist staffing revealed no mortality benefit compared with nighttime staffing by medical trainees with telephone access to an intensivist.

Do we need a 24 hour presence of the ICU specialist in the unit?

A large retrospective cohort study found no mortality benefit from presence of an intensivist at night in ICUs with high-intensity daytime staff, but did identify a significant reduction in mortality in those with low-intensity daytime staffing.

Do we need a 24 hour presence of the ICU specialist in the unit?

- The largest retrospective cohort study using the Project IMPACT database established that nighttime physician staffing models did not affect patient outcomes.

- However, nighttime staffing without any physician was associated with reduced odds of hospital mortality possibly attributed to differences in end-of-life care practices.

- Further the study demonstrated nighttime staffing with an attending non-intensivist was associated with a slightly longer duration of mechanical ventilation.

Do we need a 24 hour presence of the ICU specialist in the unit?

★ In a pilot study from Canada using an alternating crossover design in two types of ICUs comparing two models of intensivist staffing: standard and shift work 24-hour intensivist presence, implemented by shift work, was better for intensivists and had no detrimental effect on outcomes for patients, families, or ICU nurses.

★ However, the worsening shortage of intensivists makes 24/7 staffing a problem.

The interaction and relationship of the ICU specialist with the primary consultant.

- Cooperation between an intensivist and the primary physician admitting the patient in the ICU.

- In the dual consultant model, there must be harmony and all measures need to be taken to avoid conflicts.

- An effective means of cooperation is a common daily round.

- To avoid confusion with nurses and ICU staff, only the ICU team usually carries out order entries in a closed unit. Clearly, this pattern requires a great deal of communication with all concerned.

- Hospital administrators to implement organizational and financial structures.

- Conflicts should never be discussed in front of patients or relatives.

- All the studies showing intensivist lead ICUs were beneficial is that they were performed and published by intensivists.
In what way can services of the ICU specialist be best utilised for improved patient outcomes?

- Clinical Management
- Research
- ICU Administration
- Teaching
Burnout in ICU Specialists.

- Burnout usually results from too much work and responsibility with little interim periods for recovery.

- Its symptoms may vary from tiredness, headaches, eating and sleeping problems to emotional and communicational problems with patients and colleagues.

- In a French study, high levels of burnout were identified in 46.5% of the respondents.

- Burnout syndrome is a serious concern among health care workers in the ICU environment clearly related to ICU organization, duration of working hours, conflicts within the ICU, communication among healthcare workers, and the management of end-of-life care.

ICU without walls' and the role and responsibility of ICU specialists.

The intensivist may also provide services such as but not limited to:
- Management of patients in the high-dependency unit
- Medical Emergency Team
- Management of patients in the Emergency department
- Trauma team
- CPR team
- Artificial airway management
- Invasive procedures outside the ICU (e.g., Central Line, PICC lines, Lumbar puncture, Insertion of feeding tubes etc)

Thank You