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COMMUNICATION ARTICLE

Emergency Medicine Teaching of Undergraduate Medical Students in Iraq: A Call for Review of The Current Status

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ABSTRACT

Aims of this document are developing emergency medicine curriculum model for undergraduate medical students through defining the basic requirements of that curriculum. Encourage review of the current educational process of emergency medicine in Iraq and the system of evaluation and assessment of students.

The teaching of emergency medicine is considered now a cornerstone in the medical education and the updates and developments in this field necessitate reconsideration of the methodology and curriculum applied in our universities.

The suggestions proposed in this paper can be first step toward renovation of emergency medicine teaching in Iraq.

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BACKGROUND

The core mission of medicine is to save patients' life, especially in critical situations. The demand for emergency medical physicians, staff, and resources have been exponentially increased in the last years due to an increase in the number of the population, the magnitude of accidents, and extent of critical conditions¹.

Iraq has a long history of catastrophes with a massive number of casualties and limited resources for emergency medical services to manage such events effectively². Despite that and the insecure environments, our doctors and staff demonstrate a professional and patriotic role in helping the victims all over Iraq. However, in our country, the emergency medical system is still not

organized and operated on by doctors from all specialties. The newly graduate doctors are first-line responders and have a key role in this system. Unfortunately, sometimes, there is a lack of supervision by senior doctors to guide the management of critical patients in the first few minutes. It is possible that under-skilled newly graduates are endangering patients' life by taking first-line positions that necessitate immediate actions³.

The essential skills of any doctor are to recognize and manage emergency cases efficiently and in a short frame of time³.

The undergraduate medical education dose not specifically identify emergency medicine as a recognized

and well-identified entity. The majority of emergency medicine teaching is embedded within the elective units and topics of other specialties. The risk with this direction of teaching is a loss of separation line between life-threatening conditions and chronic diseases ⁴.

The target of every medical college is to ensure that 100% (and not 99%) of graduates are sufficiently and properly equipped to face acute conditions. This can be done through isolation and concertation of emergency medicine modules teaching from other stable conditions ⁵.

Aims: of this document are:

1. Developing emergency medicine curriculum model for undergraduate medical students through defining the basic requirements of that curriculum.
2. Encourage review of the current educational process of emergency medicine in Iraq and the system of evaluation and assessment of students.

Targets:

At the end of medical school, every medical graduate should be:

1. Competent, capable, and confident when facing common medical emergencies.
2. Have all the necessary knowledge and skills to save the life of patients in critical situations.
3. Mastering essential emergency medicine as a prerequisite for completion of undergraduate training and criterion for graduation.

Practical steps:

- A. Establishing a committee from all Iraqi medical colleges, emergency medicine specialists in the health sector, and any other experts responsible for reviewing the process of emergency medicine teaching for undergraduate students.
- B. Every clinical department should define clearly the theoretical knowledge and clinical skills required to be mastered by every medical student at the end of every study year.
- C. The theoretical knowledge should include all the common critical conditions. The presentations must be labelled as Emergency Medicine lectures within each branch and separate them from elective conditions.
- D. Clinical training should identify all the skills needed for emergency situations.
- E. Recommend advanced and basic life support courses as mandatory requirements for every student that must be completed before graduation. Training of these courses can be administered by external certified and qualified trainers.
- F. Each course and final examinations must include emergency cases stations which must be passed successfully.
- G. Introduce resuscitation and first aid measures within the first- or second-year curriculum.

H. Use of clinical simulation laboratories to teach medical students how to diagnose and treat medical emergencies. The simulation of the standard emergency room, fully equipped, can be an important education resource for every medical college.

- I. Planning in the next few years to establish an academic emergency medicine unit or department within each medical college. This unit or department will be responsible for all emergency medicine-related education and training, and to be run by qualified personnel in emergency medicine.
- J. Considering the involvement of external educational and training organizations and bodies (both local and international) in the education of emergency medicine.
- K. Establishing a partnership with international medical schools with applied emergency medicine curricula.

Suggested national curriculum design:

The suggested curriculum in this document represents only a first step to develop a national consensus between the experts of medical education in Iraq. The curriculum is aiming to improve critical care education based on international experiences and programs. However, our community specifications must be identified and taken into consideration as a priority in teaching.

The training modules should be extended all over the years of undergraduate study to provide the chance for the student to be competent in all the essentials of acute care.

Learning objectives:

The evaluation of medical student should be measurable based on the outcomes of learning objectives. The main points of learning that should be attained are:

1. The clinical skills to manage acute medical and surgical conditions and undifferentiated unstable or unconscious patient.
2. The ability to prioritize and triage of different critical patients in case of mass casualties.
3. Acute care skills, including basic and advanced life support, cardiopulmonary resuscitation, management of shock, trauma, and neurological catastrophe victims.
4. Basic life-saving procedures such as using of an external defibrillator, establishing iv-line, management of airways and endotracheal intubation, care of the wound, fracture, and trauma casualties.

The main clinical areas of training:

1. Medical decision-making.
2. Acute medical illness.
3. Trauma and acute injury.
4. Toxicology.
5. Safety and prevention of injury.
6. Disaster management and utilization of resources.

7. Communication, documentation, and death notification.

The contents of the suggested curriculum:

Skills curriculum

1. General clinical skills:

- a. History and examination
- b. Documentation
- c. Decision-making
- d. Time management
- e. Safe prescribing
- f. Continuity of care
- g. Therapeutic interventions

2. Procedural skills:

- a. Basic life support.
- b. Advanced life support.
- c. Vascular access and iv-line insertion.
- d. Air ways management and endotracheal intubation.
- e. Wound care.
- f. Fracture management.

3. Others:

- a. Communication skills (with colleagues, patients, and relatives), breaking bad news, debriefing and summarization; and teamwork.
- b. Continuing medical education and professional development.
- c. Ethical and medicolegal issues and regulations.
- d. Team leadership, chain of command, triage in massive accidents and time-flow control.

Specific emergency medicine curriculum:

This part of the curriculum needs the collaboration of academic and health care expert in all specialties to develop recommendations for each speciality based on the international guidelines and local expertise. The recommendations can be the basis for the undergraduate curriculum of all emergency conditions.

A. System-based acute conditions:

1. Cardiovascular system.
2. Respiratory system.
3. Neurological system.
4. GIT system.
5. Endocrine system.
6. Genitourinary system, fluid and electrolytes disturbances.
7. Musculoskeletal system.
8. Psychological conditions.
9. Oncological conditions.
10. Toxicology.
11. Eye conditions.
12. Ear, nose, and throat conditions.
13. Dermatological conditions.

B. Trauma and acute injury: including wounds, fractures, and burns of the:

1. Head and neck.
2. Chest.
3. Abdomen.
4. Upper and lower limbs.

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