

Quality of undergraduate critical care medical education in the Kingdom of Saudi Arabia. *Where do we stand?*

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Adverse events related to physicians-in-training are well documented.¹ In addition, sub-optimal care before the intensive care unit (ICU) admission is associated with higher ICU and hospital death rates, and is frequently related to poor management of simple aspects of acute care resulting from lack of knowledge, and failure to appreciate the clinical urgency of a situation by junior staff.¹ Effective early intervention requires that undergraduates to be trained in the care of the acutely ill, in order to promote a culture of safe care. Thus, resident-in-training represents a major opportunity for improving care and safety of the critically ill patient. This has prompted the medical educators to call for incorporation of elements of patient safety in undergraduate curricula years ago.² Much has been achieved at the critical care post graduate education level in the Kingdom of Saudi Arabia (KSA). In this brief communication, we sought to emphasize the need for assessment of the existing undergraduate medical curricula in KSA, with regards to early recognition and management of critical illness by the junior staff, and the potential for introduction of educational curricula to enhance patient safety.

A systematic review concluded that the training of healthcare staff in the care of acutely ill patients continues to be suboptimal.³ This review highlighted consistent themes regarding undergraduate and junior doctors from westernized countries in lacking knowledge in all aspects of acute care, including the recognition, and management of acutely ill patient. This was emphasized in another study by Kelly.⁴ In his study, Kelly⁴ showed that 94% of students questioned stated they had received less than one week of experience within the ICU. It is thus, unsurprising that there is a lack of knowledge in this field. This problem is not solely confined to developed countries. Medical

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training in KSA has undergone much significant reorganization in recent years. While some research has been conducted into medical students' knowledge and ability to recognize critically ill patients, there is paucity of such evidence in KSA. This is yet to be born.

In response to recommendations from regulatory bodies for medical education in the United States (The Accreditation Council for Graduate Medical Education (ACGME) and The Accreditation Council for Continuing Medical Education (ACCME), the American College of Critical Care Medicine (ACCM) has revised the previously published residents educational guidelines for critical care medicine (CCM). The ACCM took a new approach to the scope of the guideline and its contents. It now believe that learning CCM is optimized when the learner is exposed to and participates in the practical aspect of critical care.⁵

Based on these new recommendations by the ACCM, educational courses for undergraduates were developed, such as the Acute Life Threatening Events-Recognition and Treatment (ALERT) course (www.alert-course.com) The ALERT course standardize the clinical approach to the recognition and assessment of acutely ill patients as described in Table 1. The purpose of this course is to provide trainees with a broad range of knowledge, skills, and attitudes to be able to: assess any acutely ill patient and commence resuscitation if necessary; diagnose the most likely underlying problem; initiate appropriate investigations, commence appropriate immediate treatment; and identify and liaise with the inpatient teams to ensure appropriate definitive care.

In his very recent paper and despite the extensive work that was carried out in the field of critical care undergraduate's medical education in USA, Fessler⁶

Table 1 - Initial assessment approach for a sick patient. The ABCDE system of assessment for the critically ill patients (to be completed in 5 minutes).

Assessment		
A	Airway	Patient is talking Stridor heard
B	Breathing	Chest movement is equal Respiratory rate
C	Circulation	Pulse rate Peripheral temperature or capillary refill
D	Disability	Level of consciousness Pain
E	Exposure	Obvious inflammation Bleeding

continues to believe that it remains to be variable, scattered, and fragmented. He urges medical schools in the USA to assess their curricula if gaps in critical care education are to be closed.

In conclusion, there is an urgent need to conduct research in the quality of undergraduate critical care medical education in KSA, to see if our future doctors are ready to recognize critically ill patients early during their illness to make a difference in outcomes. Stakeholders of medical education in KSA have to then search for ways for further improvement if it then deemed to be necessary. Courses like ALERT are many. They could form the basis for standardized undergraduate training in acute care in KSA, with the potential to link in with postgraduate training programmes as the foundation for improving the care of the acutely ill patient throughout the healthcare systems.

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Ethical Consent

All manuscripts reporting the results of experimental investigations involving human subjects should include a statement confirming that informed consent was obtained from each subject or subject's guardian, after receiving approval of the experimental protocol by a local human ethics committee, or institutional review board. When reporting experiments on animals, authors should indicate whether the institutional and national guide for the care and use of laboratory animals was followed.