

# The Risky Business of Excluding Traumatology from Undergraduate Clinical Training

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The worldwide incidence of trauma related mortality is disproportionately distributed, with low and middle income countries bearing the large collective burden of trauma induced morbidity and mortality [1]. Deaths from trauma in these regions equal those resulting from the three main infectious diseases combined; HIV/AIDS, malaria, and tuberculosis [1]. Consequently, with the lack of appropriate trauma care and infrastructure, patient outcomes in these regions are often poor [2].

Trauma is postulated to occupy 20% of the global disease burden by 2020 [1]. Despite the increased burden of death and disability from injuries in low to middle income countries, efforts to address this epidemic have been few and far between [1, 2]. The enormity of this situation is further magnified by the dearth of emphasis on traumatology in medical schools' syllabi. Medical students in their penultimate years of training as well as junior doctors often find themselves ill-trained and ill-equipped to deal with trauma in emergency settings [3].

This phenomenon is not unique to medical education in developing nations. Despite concerted efforts to promote the study of trauma across healthcare settings, undergraduate exposure to trauma and acute care remains grossly deficient [3]. Training in basic trauma care is limited during undergraduate clinical years even in western medical schools. Research into finding the root-cause of deficient training in traumatology at the undergraduate level is also scarce. A recent survey of British medical undergraduates by Mastoridis and colleagues [4] found that 60% of students had received <5 hours of lecture-based teaching related to trauma management. Alarmingly, only 16% of students described trauma teaching to be adequate at their undergraduate level. Presently, medical educators are finding it increasingly difficult to incorporate fresh innovations and topics in the medical curricula due to resource constraints and a lack of standardized learning tools for undergraduate students [4].

In order to address the paucity of trauma training amongst medical students, there has been considerable interest in introducing the Advanced

Trauma Life Support (ATLS) program at the undergraduate level. Some academicians argue that trauma teaching would be difficult to follow by students at the undergraduate level since they are not far enough in their training and development [3-5]. However, Ali and colleagues demonstrated that Canadian medical students who undertook a course in ATLS were able to appropriately manage trauma patients in real clinical settings [5]. The American College of Surgeons (ACS), having recognized the apparent lack of formative trauma training, has introduced the Trauma Evaluation and Management (TEAM) module for undergraduate programs. This comprehensive adaptation of the ATLS is able to convey the basic principles of the program without the need to undertake a full ATLS course [6]. This program has shown to be effective at inculcating skills for trauma management amongst senior medical students [3]. Such a program or a variation of it would make trauma teaching effective and provide young doctors the skills to cope with acutely injured patients that often walk through the doors of emergency departments (EDs) in huge numbers, especially in low-middle income nations [2].

Healthcare systems, especially in resource-poor health care settings, stand to gain from basic trauma training at the undergraduate level for a multitude of reasons. First, healthcare workers proficient in trauma management would be able to constructively contribute to trauma care in increasing numbers. Assistance from non-governmental organizations and local government initiatives with a focus on healthcare and injury prevention could help in the transfer of skills and expertise from developed healthcare systems to health systems lacking trauma training. Second, trauma medicine remains an increasingly undervalued specialty, especially in developing nations. Exposure to trauma care, during training as well as in the ED, would encourage medical undergraduates to adopt it as a career. Third, trauma teaching may embolden efforts to institute formal trauma training programs and fellowships in settings where such systems are lacking. Finally, concerted efforts

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and interest towards improving trauma would bolster research into trauma systems and outcomes, which is scarcely done in low-middle income healthcare settings.

Trauma systems in the developing world remain grossly underdeveloped. Until these systems are upgraded, enhanced know-how of trauma care amongst medical professionals at all levels of healthcare delivery can lead to improved patient outcomes. Investing time and resources in processes such as the ATLS and TEAM, during formative medical training, could prove to be rewarding to fragile healthcare systems such as those of South Asia where basic pre-hospital care is often unavailable. For medical educators, the time is nigh to inculcate trauma life support syllabi in the medical curricula.

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