



The Importance of Maintaining Medical Education by Promoting Emergency Medicine Training in Global Conflict Settings

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Editorial

Countries in conflict often have acute shortages of healthcare providers with training adequate to meet the healthcare demands of impacted societies. Health care education is key to producing the workforce of providers vital to maintaining a functioning health care system, as well as stabilizing a country post conflict. Conflicts not only disrupt access to medical care for affected populations, but often critically impair the education systems that train health care providers at all levels. Civil conflict has been shown to have devastating long-term public health effects on death and disability post-war, with civilian suffering extending well beyond the period of active warfare [1]. As documented in the recent Syrian war, hospitals and healthcare providers are increasingly being directly targeted during conflicts, in violation of international humanitarian law and basic human rights, which further exacerbates the health care provider shortage [2,3]. Efforts to maintain health education during and after conflict may help mitigate these healthcare shortages and improve the health of affected populations. The unique challenges and opportunities in implementing emergency medicine training programs during and immediately post conflict that can help start the health reconstruction process have been well documented in the literature [4-11]. While emergency medicine training provides excellent skills for health care provision in conflict and post conflict settings, investment is ultimately needed for long term sustainability of these programs.

Conflict and crisis settings can be broadly characterized by three phases. First, an emergency phase in which there is active fighting and civil strife; second, a transition phase in the immediate aftermath of a cessation of hostilities; and third, a development phase in which health care infrastructure is reconstructed. The health care education needs for each phase differ; moreover, there may be medical education needs tied to the conflict itself. Disruption in maintaining medical education, including a lack of exposure to key courses or clinical rotations, can result in gaps in fundamental competencies and proficiencies. Emergency medicine training and capacity building in countries in conflict can be a vital resource not only during active conflict, but throughout the transition and development phases post conflict [4-6,8,10]. In Syria, where the emergency phase of the conflict is evident, the key trends affecting health care providers and educators can be clearly identified. Many medical school faculty members have fled to neighboring countries, been detained, or even killed. Healthcare workers in Syria operate at high risk. Statistics compiled about attacks on medical infrastructure and health care personnel by Physicians for Human Rights indicate that as of May 2017 there were 477 attacks on 324 separate medical facilities and 820 medical personnel have been killed. The highest percentage of health care personnel killed were doctors (31%), followed by nurses (23%) [12]. Many of these deaths resulted from shelling and bombing attacks against medical spaces, and took place while the victims were providing patient care [12]. In addition to the dangers faced by providers, there are severe physical constraints on clinical teaching environments. For example, field hospitals have been moved underground, including into dug-out caves, and make-shift hospitals have little or no resuscitation or surgical equipment [13,14]. Despite difficult circumstances and austere environments, efforts are being undertaken to maintain health education systems within Syria during this phase. These attempts may provide important information on the

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challenges, threats, and opportunities faced by those maintaining educational systems in times of conflict. Academic emergency medicine programs are working with Syrian medical educators to develop residency training programs for medical students and residents in other primary care specialties in besieged areas of Syria through a collaborative effort involving the Universities of Utah, Harvard and Yale. The first field training course emphasizing basic emergency medicine principles with advanced cardiac and trauma life support instruction is scheduled for September 2017. Interactive on-line teaching courses that permit emergency medicine faculty in the United States to connect directly with students and resident physicians in Syria are being developed on the topics of trauma, wound management, pulmonology, cardiology, and toxicology.

Maintaining medical education by promoting emergency medicine in global conflict settings is critical in active conflicts such as in Syria, and learning from these efforts can help promote health education in future wars and conflicts. Delivering emergency medicine educational curricula and establishing residency training programs for physicians who choose to remain and rebuild their country's healthcare infrastructure should start during the emergency phase. Provision of health education supports and especially emergency medicine training early in a conflict can help save lives, avoid gaps in subsequent transition and development stages, and facilitate stabilizing the healthcare system.

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