

ity and mortality for many conditions, including road and birth trauma, and chronic and acute diseases. Recent assessments of the burden of surgical disease and the relative cost-effectiveness of essential surgical care have kindled international interest. Previous work suggests that 11% of the global burden of disease may be treated with surgery. Many humanitarian and non-governmental organizations provide surgical services. Although delivery of surgery by these organizations impacts the global burden of disease, the impact has yet to be formally evaluated and aggregated. Understanding the collective contribution made by the humanitarian community would further measure the “met need” for surgical services. Greater coordination between these organizations would identify the regions of greatest need and potentially provide primary data on regional surgical epidemiology and outcomes of care. This presentation will discuss the burden of surgical disease and the impact of surgical services delivered by humanitarian aid and disaster relief organizations may have on disability and premature death. The importance of surgical epidemiology and the tracking of data and outcomes also are considered.

**Keywords:** competencies; education; global health; surgery; training  
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### Value of Cranial Computed Tomography in Adult Patients with Mild Head Injuries: A Prospective Study at the University of the Philippines Philippine General Hospital

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A descriptive method was used in order to conduct a prospective study on the value of using computed tomography (CT) scans among adult patients (≥18 years old) treated at the University of the Philippines-Philippine General Hospital emergency department from January through December 2008. The patients who underwent CT scan presented with mild head injuries with a Glasgow Coma Scale (GCS) rating of 14–15.

Among the single clinical variables included, loss of consciousness had the highest percentage of a positive CT scan. A total of 83.3% of the patients with loss of consciousness showed significant findings on the CT scan related to the trauma. Other single variables studied did not yield any significant findings in CT scans such as nausea/vomiting, headache, physical injuries related to the trauma, and neurologic deficits related to the trauma. Based on the results of logistic regression, only loss of consciousness was significant based  $p = 0.05$ . Therefore, when a patient presents with loss of consciousness related to head trauma, a CT scan likely will yield a positive result. Thus, a high index of suspicion should be used.

**Keywords:** computed tomography; emergency medicine; head injury; loss of consciousness; Philippines

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### Public Health Department Training of Emergency Medical Technicians for Bioterrorism and Public Health Emergencies: Results of a National Assessment

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**Introduction:** The public health system has a specialized body of knowledge and expertise in bioterrorism and public health emergency management that can assist in the development and delivery of continuing medical education (CME) programs to meet the needs of emergency medical services (EMS) providers.

**Methods:** A nationally representative sample of the basic and paramedic EMS providers in the United States was surveyed to assess whether they had received training in weapons of mass destruction, bioterrorism, chemical terrorism, radiological terrorism, and/or public health emergencies, and how the training was provided.

**Results:** Local health departments provided little in the way of training in biologic, chemical, or radiological terrorism to responders (7.4%–14.9%). State health departments provided even less training (6.3%–17.3%) on all topics to EMS providers. Training provided by the health department in bioterrorism and public health emergency response was associated with responder comfort in responding to a bioterrorism event (OR = 2.74, 95% CI 2.68, 2.81).

**Conclusions:** Local and state public health agencies should work with the emergency medical services systems to develop and deliver training with an all-hazards approach to disasters and other public health emergencies.

**Keywords:** bioterrorism; emergency medical services; public health; training; weapons of mass destruction

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### Poster Presentations—Emergency Medical Services

#### (N27) Impact of Trauma Volume on the Effectiveness of Computed Tomography of Patients with Head Trauma

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**Objective:** The major purposes of this study were to: (1) evaluate the association between trauma volume and the positive rate of head computed tomography (CT) scans in patients with head trauma; and (2) determine the threshold of trauma volume for determining the decreased effectiveness of emergent head CT for head trauma patients.

**Methods:** In a 1,300-bed tertiary care hospital, data involving trauma patient volume, head trauma patient volume, the number of emergent head CTs, and the number of positive head CTs were collected on a monthly basis. The potential influential factor of quality of care performed by different physicians was measured by calculating their rate of missed head injuries. Comparison primarily was made between the trauma patient volume and the positive rate of HCTs.