Furthermore, the application of the formula should contribute to the establishment of a management system for hospitals to receive injured victims on a regional basis.

Keywords: assessment; blood purification; capacity; estimation; formula; heat; hospitals; injured victims; response
Prehosp Disast Med 2005;20(2):s65–s66

Impact of Two Terrorist Bombings on Two Hospitals in Istanbul, Turkey in November, 2003

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Objective: To estimate the impact of the terrorist bombings of the Hong Kong Shanghai Banking Corporation headquarters and the British consulate in Istanbul, Turkey on 20 November 2003 on two nearby hospitals in terms of epidemiological outcomes, resource utilization, and time course of emergency needs.
Methods: Data were abstracted from hospital records of injured survivors, who used the emergency departments (ED) at the Taksim Education and Research State Hospital (TERSH) and the American Hospital (AH) in Istanbul on 20 November 2003, to determine the totals and rates of mortality (early, late, and critical), injury, critical injury (injury severity score (ISS) >15), ED use, hospitalization, operative care, in-hospital over-triage, and the time intervals of ED arrival.
Results: The TERSH received 184 victims in the first hour after the initial blast, of which 88 (48%) were brought by emergency medical services (EMS), 171 (93%) had lacerations, 7 (4%) had penetrating eye injuries, 28 (15%) were hospitalized, 18 (10%) received operative care, and seven (4%) were critically injured. Three deaths occurred in critically injured survivors, including one early death in the operating room and two late deaths on days five and six. The AH received 16 victims, of which 14 (88%) had lacerations, three (19%) were hospitalized, two (13%) received operative care, and one (6%) was critically injured. An additional four victims were transferred to the AH from other hospitals, of which three were hospitalized, and none were critically injured. No early or late deaths occurred.
Conclusion: Mortality, injury, and hospitalization rates at both hospitals were consistent with previous reports of open-air, mass-casualty, terrorist bombings. The TERSH experienced an unprecedented demand for ED surge capacity in an open-air bombing.

Keywords: bombing; critical care; emergency department (ED); emergency management; emergency medical services (EMS); emergency medicine; hospital; injury; Istanbul; mass-casualty; terrorism; trauma; Turkey
Prehosp Disast Med 2005;20(2):s66

Lessons Learned Following the Mass-Casualty Terrorist Bombings in Istanbul, Turkey, November 2003

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Objective: This study sought to describe the two mass-casualty terrorist attacks that occurred in Istanbul, Turkey in November 2003 and the resulting prehospital emergency response.
Methods: A complex, retrospective, descriptive study was performed using open-source reports, interviews, direct measurements of street distances, and hospital records from the American Hospital (AH) and the Taksim Education and Research State Hospital (TERSH) in Istanbul.
Results: On 15 November 2003, improvised explosive devices (IEDs) in trucks were detonated outside the Beth Israel and Neve Shalom Synagogues, killing 30 persons and injuring an estimated 300. At least 50 ambulances were dispatched to the scenes. Victims were distributed to at least 23 medical facilities. The AH, a private hospital located six kilometers from both synagogues, received 69 injured survivors, of which 86% had secondary blast injuries and 13% were admitted to the hospital. The TERSH, a government hospital located one kilometer from both synagogues, received 48 injured survivors. On 20 November, IEDs in trucks were detonated outside the Hong Kong Shanghai Banking Corporation (HSBC) headquarters and the British Consulate (BC), killing 33 and injuring an estimated 450. At least 50 ambulances were dispatched to the scenes. Victims presented to at least 24 medical facilities. The TERSH, located 18 kilometers from the HSBC site and two kilometers from the BC site, received 184 injured survivors, of which 93% had secondary blast injuries, and 15% were hospitalized. The AH, located nine kilometers from the HSBC site and six kilometers from the BC site, received 16 victims.
Conclusion: The twin suicide truck bombings on 15 and 20 November 2003 were the two largest terrorist attacks in modern Turkish history, collectively killing 63 persons and injuring an estimated 750. The vast majority of victims had secondary blast injuries that were relatively minor. Victims were distributed unequally to medical facilities on both dates.

Keywords: bombing; emergency management; emergency medical services (EMS); emergency medicine; injury; maldistribution; terrorism; trauma; Turkey
Prehosp Disast Med 2005;20(2):s66