

# Hospital Preparedness: A Public Health Mandate Remains Under-Appreciated

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## Abstract

At the time of this writing, the scope of devastation of the 26 December 2004 magnitude 9.0 Banda Aceh earthquake and subsequent South Asia Tsunami has yet to be determined. Initial reports in the lay press indicate that all 569 medical facilities in Sri Lanka have been destroyed. In the Banda Aceh region, only 82 of the 400 provincial health department staff have been accounted for, and approximately 150 physicians remain listed as missing [1]. The scale of the catastrophe, and its impact on the health care infrastructure, is a bleak reminder of the random power of nature, and the need for an adequate, flexible hospital response.

Events of the past decade have increased awareness regarding mass casualty events (Table 1). The 1995 sarin nerve agent release on the Tokyo subway system raised global awareness for the potential use of so-called “weapons of mass destruction” by terrorist organizations against non-combatants, and the need to prepare non-military forces to deal with such casualties [2,3]. The subsequent push in the United States for domestic preparedness, however, largely focused on pre-hospital preparedness and protection. Nerve agent preparedness conveniently dove-tailed into pre-existing procedures for hazardous materials response, and provided an immediate threat to be managed in the pre-hospital arena. The thought of subsequent hospital-based patient management, and therefore preparedness, never approached the radar screens of government officials in charge of preparedness development and funding. Hospital capability was essentially assumed, and the burden of development and maintenance placed upon the health care industry. While individual institutions took the initiative to develop hospital-based preparedness plans, little cohesion existed at the national level.

## Figure 1

Table 1: Selected Recent Mass Casualty Disaster Events

Year	Location	Event	Deaths
2005	Buenos Aires, Argentina	Nightclub Fire	174
2004	South Asia	Tsunami	> 175,000
2004	Madrid, Spain	Explosion	202
2003	Bam, Iran	Earthquake	31,000
2003	Toronto, Canada	SARS	44
2003	Warwick, RI	Nightclub Fire	100
2002	Germany	Air Crash	71
2001	New York City, USA	Air Crash	265
2001	New York City, USA	Explosion	2,801
2001	Siberia	Air Crash	143
1995	Oklahoma City, USA	Explosion	168
1995	Tokyo, Japan	Sarin Attack	12
1994	Northridge, USA	Earthquake	57

The State of Ohio Terrorism Preparedness conference held 5-6 June 2000 in Columbus, OH, highlighted governmental indifference towards hospital capability and needs. When an attempt was made to address short-comings in current hospital preparedness, the issue was immediately deemed irrelevant to the State’s global preparedness vision, and was the only item relegated to the discussion trash bin during the entire break-out session (Figure 1). The big picture, that the hospital is part of the continuum of patient care initiated in the pre-hospital arena, appeared lost to many in leadership positions.

**Figure 2**

Figure 1: Break Out Session, State of Ohio Terrorism Preparedness Conference, 2000.



Note the discordancy between the open, optimistic ground rules and the placement of Hospital Preparedness in the refuse bin.

The subsequent mail-based anthrax attacks of 2001 re-addressed the reality that not all disasters could be managed solely in the pre-hospital arena [4,5]. Increasing attention focused upon hospital preparedness and rebuilding the previously undervalued and under-funded public health infrastructure. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) had developed specific standards for hospital preparedness, which are required for healthcare facility accreditation [6]. A modified version of the pre-hospital incident command system, known as hospital emergency incident command system (HEICS), has been adopted by many US hospitals [7]. The mandated JCAHO emergency response plans provide only an illusory preparedness, as frequently the plans are simply filed, but not drilled. Complacency in this regard may result in the paper plan syndrome [8].

These positive developments failed to resolve the complex issues of hospital preparedness. The government focus of domestic preparedness, while now acknowledging the role of hospitals, remained mitigation of weapons of mass destruction events. Smallpox response teams and syndromic surveillance were the controversial buzzwords of the day [4,5,9,10,11].

The 2003 Severe Acute Respiratory Syndrome (SARS) epidemic served as an important lesson that medical disaster preparedness cannot focus solely upon mitigation of man-made events [12,13]. Additionally, it demonstrated that apparently remote disease outbreaks, easily viewed as “someone else’s problem”, could rapidly develop local medical, economic, and political implications.

Despite increasing awareness of the importance of hospital preparedness, it remains largely an expensive unfunded mandate in the setting of other, more pressing healthcare

realities. Multiple fundamental issues in hospital preparedness remain unsolved, with far-reaching implications for the health care infrastructure. These include staffing shortages and capabilities during emergency operations, lack of hospital bed surge capacity, and reluctance in developing local and regional patient transfer capabilities in anticipation of medical infrastructure damage.

This issue of the Internet Journal of Rescue and Disaster Medicine is an important step in the development of an evidence-based approach to disaster preparedness. The published articles, each of which highlight specific aspects of hospital disaster preparedness and response, may not provide all the answers but at least provide insight into the problems managed during actual disasters. It is clear, based upon recent world events, that disaster preparedness will continue to be an important, if over-looked, mandate of global public health.

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