

## Review

# The World Trade Center Attack Doctors in the fire and police services

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### Abstract

The World Trade Center attack cast some physicians in roles outside their usual hospital practice. The incident required several physicians to function in the dangerous environment of the disaster. Priorities and triage strategies established by the police, emergency medical service and fire departments, while adhered to, required instantaneous modification and upgrading given the vast loss of civilian and rescue personnel lives. Many civilian medical staff presented themselves with good intentions but needed to be placed out of the collapse zone for fear of incurring additional casualties. In addition, problems with re-establishment of command and control, communications, personnel and equipment replacement all impacted on the rescue effort. This article recounts the roles played by the two co-authors during the World Trade Center attack.

**Keywords** doctors, fire, police, terrorism

We were watching the fire blaze through the North Tower (Tower 1) of the World Trade Center when we saw the second jet strike the South Tower (Tower 2). The mood in the offices of the New York City Police Department (NYPD) Medical Division was one of disbelief. We realized we were facing probably the largest multicasualty incident in the city's history. Almost immediately, NYPD headquarters issued a level three (highest) mobilization order and the entire NYPD was deployed.

The World Trade Center incident was technically an 'aircraft crash', which meant the Fire Department of New York (FDNY) were to assume command and control. The FDNY Emergency Medical Services (EMS) command assumed responsibility for patient triage, assessments, management, and transport. The command center was established in the lobby of the South Tower (Tower 2). Search and rescue became the primary focus of the response but this could only be achieved if the disaster was also contained and controlled. All this required the full deployment of personnel and resources from both the FDNY and the NYPD.

### Initial impressions and demands

Several issues had to be dealt with immediately and simultaneously: controlling and containing the fires, dealing with the possibility of collateral building collapses, mobilizing triage at numerous locations, stabilizing and mobilizing the anticipated vast numbers of casualties, and conducting search and rescue efforts. However, at first, chaos and confusion reigned. This was initially because communications were severely hampered by the loss of local telephone services and the onset of overwhelming cellular phone traffic. But this initial confusion was minor compared with the huge loss of personnel and resources as the FDNY command center was buried when the South Tower (Tower 2) collapsed.

Command and control was further hampered by the physical characteristics of the area. The World Trade Center site (17 acres) was effectively divided into two areas (north and south) by an unstable partially collapsed pedestrian walkway. The rubble formed 'mountains' and 'valleys' that were dangerous and unstable to walk on. Some of the debris piled three to four storeys high with 50 foot (16 m) drops between them.

Climbing these 'mountains' was difficult, especially through the limited visibility provided by the high concentration of dust that filled the air. Initial responders developed respiratory difficulties because their respirator masks had inappropriate filters. Additionally, sections of the rubble were actively burning below the surface; the subterranean fires were over 1700°F (926°C), creating ground temperatures of 110°F (43.3°C). Finally, all roads in the immediate area remained impassable, forcing access to be via circumferential routes. This lengthened response times and stressed personnel.

### Losing personnel and redeployment

The rescue effort was impacted by the overwhelming sense of loss of first responders. The FDNY Command Center, which was lost when the South Tower collapsed, included 'special operation command units'. These specialty rescue units were primarily responsible for pivotal tasks, such as building assessments, triage, and rescues within confined spaces. All these skills were critically lacking due to a loss of approximately 70% of the personnel. It is impossible to understate the psychological impact of trying to conduct such a massive search and rescue task when so many friends and comrades have been lost.

The lost personnel and command centers had to be replaced. The NYPD Special Operations Division/Emergency Services Unit moved to the evacuated Styvestant High School, situated close to the World Trade Center site. Staging areas were set up out of harm's way and, from here, all medical response units were designated to a specified area. From these distant sites, medical response units were also able to identify and communicate the resources available and needed.

### Securing peripheral areas

While some rescue teams worked in the collapse zone to gather the injured and dead, others were deployed to surrounding buildings to conduct search and rescue operations. This was not only to seek out other victims in collateral structures, but also to enhance the perimeter security in two ways. First, several of these buildings appeared in danger of collapse. Second, there was concern that these buildings could be used by terrorists to launch a subsequent attack or to deploy a secondary device (conventional or biochemical) with the specific aim of harming the rescue effort. Consider for a moment the issues and concerns you would have with providing medical backup to a police tactical unit engaged in such an operation. Will the encounter with a 'victim' in one of these buildings require medical intervention or police action? Furthermore, the risk of concomitant biochemical attack is indeed real and, while beyond the scope of this paper, nevertheless looms heavily.

### Controlling 'freelance' medical care

With the arrival of reinforcements came the unprepared 'freelancers' who, while meaning well, began their own versions of search and rescue and medical care. It was quite worrying to

see physicians dressed only in scrubs, clogs, and surgical masks attempting to negotiate the jagged metal debris to carry out their well-meaning medical interventions. In some instances, these interventions were in direct conflict with established protocols of the FDNY EMS for dealing with victims of such an incident. Needless to say, these physicians received an immediate lesson in command and control from one of the authors.

Part of the established FDNY EMS protocol authorizes only physicians from the FDNY EMS Office of Medical Affairs to conduct medical care in and around a designated collapse/disaster zone. In this area, medical control was assumed by an FDNY EMS physician (DG). Specialty units, like the NYPD Special Operations Division, had a physician assigned to their search and rescue team (CM). Both physicians consulted throughout the initial phases of the rescue effort to address issues of patient triage, and the dangers and health risks to rescue personnel. Triage stations were established throughout the perimeter of the incident area and the 'freelancing' civilian medical personnel were relegated to these stations.

The major concern is of potential injury or death to a novice rescuer. At the Oklahoma City bombing, a nurse was killed by falling debris. Many well-meaning medical staff are unaware of the potential dangers associated with collapse zone medical operations. Many were attempting to render patient care using 'ordinary' approaches in an area that demanded the extraordinary.

### Conclusion

The attack on the World Trade Center realized some of the gravest concerns that many in the medical profession prefer not to entertain. The catastrophic losses from the attack were a continued cascade of worse case scenarios. Although the resources brought to bear on this disaster taxed multiple agencies to their limits, after the first 24 hours no living victims were recovered. This led to enormous frustration and anguish among the rescue personnel whose efforts were thwarted by destruction, fire, and the seemingly immovable wreckage. The police and fire personnel sought painfully and hard for their colleagues, as well as for civilians.

There are many lessons to be learnt from the initial response to the World Trade Center attack. While the incident was dramatic, these lessons are the same as those from previous disasters, such as the earthquakes in Tanging, Kobe, Taiwan, Turkey and Armenia. First, the majority of survivors are self-rescued. Second, delays in organized rescue are not uncommon and should be an expected component of the process. While this delay should be as short as possible, it should also be recognized that time is needed to organize rescue efforts in such a way that survivors are accessed and treated within the limits of available resources. Third, successful rescue depends on simultaneous search, rescue, and medical

support, with patient management primarily focusing on rapid transport to appropriate facilities, such as trauma centers, for definitive care.

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### **Competing interests**

None declared.

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This article, and the series it is part of, is dedicated to the first responders – fire, police and medical personnel – who attended the World Trade Center disaster of 11 September 2001. They did not hesitate to place themselves in harm's way to rescue the innocent, and without their efforts many more would have perished. They will not be forgotten.

### **Further reading**

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