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# The Changing Role of Physicians in Disaster Management and Hospital Incident Command

## Abstract

Recent changes in governmental policy toward disaster medicine and hospital incident command foreshadow a significant change in the role that physicians will play in disaster preparedness and response. The distinct discipline of Disaster Medicine has received authoritative recognition and promotion in the recent Homeland Security Presidential Directive 21, and recently established guidelines for incident command within hospitals have included a new position designated as “Medical/Technical Specialist(s)” that will assist the Incident Commander in disaster-related decision-making. This is a multidisciplinary position, and its functions can be filled by one or more individuals. As physician training and competency in Disaster Medicine increases, it should be anticipated that the multiple functions of this position will increasingly be performed by physicians who are expert in Disaster Medicine. As physician training and certification in Disaster Medicine develops, it should be expected that physicians will increasingly become responsible for hospital disaster response.

The White House issued Homeland Security Presidential Directive/HSPD-21<sup>1</sup> in October 2007 and in it recognized the need to develop Disaster Medicine as a separate medical discipline that will have a vital national role in preparedness planning and disaster response. By default the current disaster planning and response of hospitals is mostly the responsibility of hospital administration, but as physicians become better trained in Disaster Medicine, and as certification of that training becomes more established, physician involvement and responsibility in hospital disaster management will increase.

The new Hospital Incident Command System (HICS), developed by the HEICS IV National Work Group<sup>2</sup> and released in August 2006, has prescribed several significant changes in the manner in which hospitals organize to deal with disastrous incidents. One of the most significant and important changes made is the establishment of provisions for the new position of “Medical/Technical Specialist(s)” within the incident command organizational chart, as an entity that will provide important disaster-specific consultative judgment to the Incident Commander. The developers of the HICS system realized the need for such integration of specialized technical input at this high level of incident command, and delineated the scope of expertise and competency necessary for function in this role, while appropriately leaving the position without a firm definition. This is due in part to the need for a wide variety of expertise that must be employed within different disaster situations, in addition to the wide disparity in Disaster Medicine-related competencies available within different hospital staffs. Education and training in Disaster Medicine is presently in its relative infancy, but as the level of comprehensive

and dedicated curricular training of physicians in this discipline increases, it should be anticipated that most of the functions and expertise envisioned in the position of the HICS Medical/Technical Specialist would be encompassed in the scope of practice of those trained and experienced in Disaster Medicine.

The new HICS system recognizes the need for integrating medical and technical judgment in execution of all-hazard disaster response at a high level in the hospital's decision-making process, through the creation of the Medical/Technical Specialist as a position that is directly in consultation with the Incident Commander. Previous hospital incident command structures did not recognize the need for such a position within a hospital's incident command structure, and this probably stems from the origins of incident command in wildfire response in which the Incident Commanders themselves possessed much of the technical knowledge and expertise necessary for rapid command decisions. Incident command in the hospital setting is significantly different in that the Incident Commander typically has a business and administrative background, with little or no clinical or technical expertise. Typically hospital administrations tend to look to their medical staff for medical or technical input, such as to the Chief of the Medical Staff or to the Chief Medical Officer, however, most of these physicians are untrained in the broad range of expertise and competencies necessary for effective all-hazards disaster planning and response. The creation of the new Medical/Technical Specialist position at a high level within hospital Incident Command structure recognizes the need to integrate new disaster-related medical and technical competencies into the decision-making

conduct of all-hazards disaster response, and these are competencies that are encompassed in the developing specialization of Disaster Medicine.

The HICS position of Medical/Technical Specialist, as described by the HEICS IV National Work Group, is a multidisciplinary and multifunctional entity that is in a position to provide direct input to the Incident Commander, as that Incident Commander deems appropriate. The input from this position can arise from one or more individuals, again as deemed appropriate by the Incident Commander. While there are many suggestions as to the technical skills and knowledge-base required for personnel to fill this role, there remains an absence of well-defined role models for a standard Medical/Technical Specialist. The technical considerations described within the position of Medical/Technical Specialist include: biological weapons, chemical weapons, radiological weapons, clinical medicine (specifically noted are infectious disease, pediatrics, and medical ethics), administrative and staff concerns, and legal affairs (specifically noted is risk management). It is vital to consider these issues, as well as many others (such as logistics, security, and critical infrastructure) in the complex decision-making that takes place at the Incident Command level, and to this effect the HICS suggested potential candidates to serve as Medical/Technical Specialist(s) which include: industrial hygienist, infectious disease specialist, infection control, epidemiology, chief of staff, chief of pediatrics, radiation safety officer, nuclear medicine, health physicist, structural engineer, outpatient services administrator, chief of trauma, primary care director, behavioral health director, legal services, risk manager, poison control director, and IT/IS director. Having all of these positions and individuals

immediately available to the Incident Commander would prove very complicated and potentially confusing. Most, if not all, of the disaster-related functions that are included in these disciplines, should be encompassed in the range of capabilities of a physician appropriately trained in Disaster Medicine. The Disaster Medicine physician provides a “one stop shop” within the hospital’s Incident Command Center, for technical input and judgment advice that can be readily accessed by the Incident Commander in a rapidly evolving disaster situation that requires integrated judgments to be made across many parameters. This does not preclude coordinated consultation with issue-specific subject matter experts by the Incident Commander, but rather enables the more appropriate utilization of such specialty experts.

As Disaster Medicine physicians become assimilated into the incident command structure at the level of the Medical/Technical Specialist, they must be qualified, accessible, and integrated into general hospital functions. While such physicians optimally should be clinically active members of the hospital medical staff as their primary medical specialty would dictate, they should also have specific training and experience in disaster medical issues beyond their primary specialty training. This training and experience includes areas such as mass casualty care and planning for all-hazard and WMD response, working knowledge of the National Incident Management System (NIMS) and incident command structure, personal protective equipment (PPE) and decontamination understanding, critical infrastructure, administrative concerns (including knowledge of how external factors and events may change these concerns), critical decision-making skills, and legal and ethical issues, among others. Disaster

Medicine physicians should also be able to demonstrate an ability to be proactive and anticipate future needs before they arise, which can provide the Incident Commander with an opportunity to get ahead of the situation before it deteriorates completely.

Specific disaster medicine training can be currently obtained in a number of ways. Courses such as those developed by the American Medical Association Center for Disaster Preparedness and Emergency Response include Basic Disaster Life Support or (BDLS) and Advanced Disaster Life Support (ADLS) courses offered throughout the nation by a number of educational agencies, and sponsored by the National Disaster Life Support Foundation.<sup>3</sup> Other educational specific courses are offered through the Federal Emergency Management Agency (FEMA) through their online Emergency Management Institute Courses format.<sup>4</sup> Online courses are organized into major headings including the Healthcare Leadership Course (HCL) which presents technically correct scenario-based disaster exercises, the Incident Command System/Unified Command System and National Incident Management System (NIMS) modules, and the Professional Development Service (PDS) offering courses in Principles of Disaster Management, Decision Making and Problem Solving, and Leadership and Influence.

Much disaster medicine training and experience can often be achieved through “real world” participation in disaster response such as Disaster Medical Assistance Team (DMAT) training and deployment, or through involvement with Emergency Medical Services (EMS) or emergency department responses. One obvious expectation, however, is that a hospital’s designated Medical/Technical Specialist(s) should be expected to have



undergone significant training in disaster medical response that would include both natural and man-made disasters, especially disasters caused by weapons of mass destruction. Such training would also be expected to address response organizational planning, psychosocial issues, and critical infrastructure. Such individuals should also have practical preparation for dealing with hazardous materials and all-hazards contamination, while also having practical preparation in disaster planning and drill activities.

The Medical/Technical Specialist needs to possess additional knowledge from outside of traditional medical sciences to be comfortable and competent in making disaster-related decisions. In that disasters may affect resources and infrastructure outside of the hospital, the Medical/Technical Specialist must be cognizant of the availability of logistical supplies and additional personnel resources. This will require in-depth knowledge of local public health protocols, regional disaster plans and the availability of other hospitals in the region to receive patients in transfer, or who may be able to provide medical staff to assist with the care at the home facility. The understanding of the role of state and federal assets, and how to obtain them, is equally important. Those functioning in the role of the Medical/Technical Specialist must be cognizant of the role of law enforcement and other federal agencies in the event of man-made disasters. While much of this knowledge might be obtained from Disaster Medicine literature and distant learning modalities, a significant need exists for practical experience and training for those functioning in the role of Medical/Technical Specialist. Through these non-traditional learning experiences, the Medical/Technical Specialist will

inherently develop personal contacts within other response groups who can serve as subject matter experts. These experts can provide valuable insight into their individual group's perspective and abilities, thereby allowing the Medical/Technical Specialist to better anticipate needs and utilize the group's skill set for new and unconventional approaches. The Medical/Technical Specialist should be included in all decision-making involving the hospital's response to local emergencies and planning sessions with area disaster leaders. Integrating these Medical/Technical Specialists into the planning process gives them the opportunity to meet other response personnel in a low-stress environment, allowing the entire Incident Command team to develop familiarity and trust with each other. This rapport will minimize the time spent at the beginning of an event trying to "learn who the players are" and focus on the task at hand. Involvement in the planning process also allows the Medical/Technical Specialists to apply their knowledge of local medical capabilities, available assets, and critical decision points during the response to an event in an attempt to ascertain shortfalls in the response plan and address those needs in advance, a skill which may not be readily available in administrative personnel.

More comprehensive disaster medical training is currently available in fellowships that are being established to fill the need for in-depth Disaster Medicine expertise. The fellowships recognized by the National Association of Emergency Medical Services Physicians (NAEMSP)<sup>5</sup> include several that have been developed as Disaster Medicine fellowships and are established within the departments of Emergency Medicine of their respective institutions. Disaster response is a multi-disciplinary endeavor and all medical specialties have a vital role to play in it. To this effect,

members from all branches of medicine should be encouraged to become involved in Disaster Medicine training. One prototype fellowship program that is Primary Care-based has been developed by the Family Medicine Department of the University of Tennessee's Graduate School of Medicine<sup>6</sup>, and is being piloted in cooperation with the National Security Directorate of Oak Ridge National Laboratory. Additionally, standards of Disaster Medicine competency are being delineated by a newly created board certification in Disaster Medicine that is now available through the American Board of Physician Specialties.<sup>7</sup> This board certification in Disaster Medicine is being offered for the first time in 2007 with potential candidates required to produce evidence of practical experience in disaster situations, in addition to passing a rigorous comprehensive written and oral/practical examination.

Disaster Medicine capabilities must be rapidly available to the Incident Commander on short notice, in order for the hospital to optimally respond to rapidly developing disastrous incidents. Hospitals must have appropriate protocols in place to address many situations, but unexpected incidents, or parts of incidents, will always occur that are outside of the established protocols, and such unexpected incidents require response decision-making based upon judgment that integrates the interactions between the many dimensions of healthcare delivery and administration. To assist the Incident Commander in such a capacity, physicians trained in Disaster Medicine that function in the position of Medical/Technical Specialist need to be available for hospital disaster response at all times, and this requires a new type of "on call" list to provide such coverage on a 24/7 basis.

Homeland Security Presidential Directive 21 and the creation of the position of the Medical/Technical Specialist within the Hospital Incident Command System indicates that disaster planning and response is shifting away from being solely the responsibility of hospital administration, and toward increased responsibility for the medical staff. Appropriate training and certification is becoming available for such purpose, and now hospital administrators and hospital medical staffs can, and must, organize and provide for qualified coverage of Medical/Technical Specialist responsibilities as outlined in the new Hospital Incident Command System. Of greater importance than compliance with external standards and funding requirements, this training and its implementation into the medical staff would enhance the healthcare system's ability to provide the best medical care for patients and the community under difficult and desperate circumstances.

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<sup>1</sup> "Homeland Security Presidential Directive/HSPD-21" The White House. October 18, 2007. Available at: <http://www.fas.org/irp/offdocs/nspd/hspd-21.htm> . Accessed on November 17, 2007.

<sup>2</sup> HEICS IV National Work Group. *Hospital Incident Command System Guidebook*. August 2006. Available at: <http://www.emsa.ca.gov/hics/hics%20guidebook%20and%20glossary.pdf> . Accessed on August 7, 2007.

<sup>3</sup> NDLSF Background [National Disaster Life Support Foundation web site]. Available at: <http://66.160.8.45/index.asp> . Accessed on August 7, 2007.

<sup>4</sup> EMI Courses & Schedules [FEMA Emergency Management Institute web site]. Available at: <http://training.fema.gov/EMICourses> . Accessed on August 7, 2007.

<sup>5</sup> NAEMSP Fellowship Categories [National Association of Emergency Medical Service Physicians web site]. Available at: <http://www.naemsp.org/fellowshipprograms.html> . Accessed on August 7, 2007.

<sup>6</sup> Graduate Medical Fellowship in Homeland Security Studies [University of Tennessee Graduate School of Medicine web site]. Available at: <http://gsm.utmck.edu/hss> . Accessed on August 7, 2007.

<sup>7</sup> American Board of Disaster Medicine Certification Exams [American Board of Physician Specialties web site]. Available at: [http://www.abpsga.org/certification/disaster\\_medicine/index.html](http://www.abpsga.org/certification/disaster_medicine/index.html) . Accessed on August 7, 2007.