Disaster Medicine: Strike Team Operations
Tools and Talent 2006  Chief Medical Officer, DMAT PA-1 Keith Conover, M.D., FACEP  www.conovers.org

Disaster Medicine can mean many things: multiple trauma patients in the hospital ED, triage at a vehicle accidents, or dealing with chemical or biological attacks, for just a few examples. But this presentation focuses more narrowly.

Strike Teams are made up of different types of people (e.g., doc, RN, medic) put together for a specific task. The task at issue here is delivering medical care right after a catastrophic disaster.

The National Disaster Medical System (NDMS) is now using Strike Teams to get medical care quickly to remote locations. This can be more efficient than trying to bring patients to a central tent hospital, especially when transportation is limited. But other organizations deploy medical Strike Teams, too. And this is about how to prepare for such deployments.

Joining a DMAT (Disaster Medical Assistance Team) or one of the other types of NDMS teams (see back) is certainly an effective way to start preparing. DMATs and other NDMS teams are composed of people who volunteer their time to train together to be able to respond during a disaster. When activated, they become paid employees of the Department of Homeland Security, Federal Emergency Management Agency (DHS/FEMA). DMAT members must be able to survive in relatively austere conditions, i.e., be “low-maintenance.” When possible, DMATs set up tent-bunkrooms, as well as portable water treatment, and sometimes even showers.

But even if you don’t join a DMAT, there are other ways to prepare to respond as part of a disaster medical strike team. The key is not only to be low-maintenance, but to be self-sufficient. A good rule of thumb is that, right after a disaster, there

New National Incident Management System (NIMS) Requirements.
The NIMS, previously the National Interagency Incident Management (NIIMS) System, which includes the Incident Command System (ICS), now imposes training requirements for all emergency responders.

Entry level first responders & disaster workers
• IS-700: NIMS, An Introduction
• ICS-100: Introduction to ICS or equivalent

First-Line Supervisors (e.g., Crew Chief)
• IS-700
• ICS-100
• ICS-200: Basic ICS or equivalent

Middle Managers (e.g., Strike Team Leaders)
• IS-700
• IS-800
• ICS-100
• ICS-200
• ICS-300: Intermediate ICS or equivalent (FY07 Requirement)

Command and General Staff
• IS-700
• IS-800
• ICS-100
• ICS-200
• ICS-300 (FY07 Requirement)
• ICS-400: Advanced ICS or equivalent (FY07 Requirement)

NIMS information and online training are available at www.fema.gov/nims/index.shtm
is no food, there is no water, there is no shelter, there is no transportation, there is no gas, there are no garages or other maintenance facilities, there are no communications, and there is no organization. At least for the first few days, what you've brought is what you've got.

**Backcountry Search and Rescue** training is some of the best preparation you can get. In Pennsylvania, check with the Pennsylvania Search and Rescue Council (www.psarc.org) to find your nearest SAR team. In Pittsburgh, contact the Allegheny Mountain Rescue Group (www.amrg.info). The CDS Outdoor School (www.cdsoutdoor.com) is one of the state’s leading purveyors of SAR classes. SAR training consists of the following components, all of which are relevant to disaster medical strike team operations:

- **Survival** and specifically short-term survival, is key. Knowing survival physiology, how to select lightweight shelters, how to improvise shelters, and how to deal with extremes of weather are musts.

- **Wilderness Travel** training includes selection of appropriate clothing, boots, and personal equipment such as sleeping bags and pads, headlights, and cooking gear. It also deals with assessing and crossing difficult terrain, stream crossings, and identifying and dealing with outdoor hazards.

- **Land Navigation** teaches how to use map, compass, orienteering and routefinding techniques, altimeter, GPS and environmental clues to not only avoid getting lost, but to get you to where you’re supposed to go. Even in a vehicle, navigation can be a challenge when all the road signs have been blown down, and land navigation expertise may be needed even to get to the disaster site.

- **Incident Management** skills are also essential. FEMA now requires all emergency response personnel to train and certify in the NIMS and ICS (see blue box on front). The online training is a good start. But for disaster medical strike team operations, people skilled at running multi-agency lost person searches (or wildland fires, which are similar) are worth their weight in gold.

- **Communications** are a chronic problem right after a disaster. Strike teams with their own good quality handheld radios, with mag-mount vehicle antennas, and lots of disposable batteries (remember—no AC power), have a better chance of communicating internally. But field-programmable radios, and people who can reprogram them, can be invaluable in communicating with others.

- **Improvised Rescue**, though seldom needed for disaster medical operations (USAR teams usually do rescue) should be practiced, if only for injured strike team members.

- **Wilderness First Aid** and medical training focuses on delivering care with minimal (and often improvised) equipment, selection of appropriate lightweight kits to carry, and various field expedients—ideal for disasters. Wilderness EMT courses, especially the WEMSI curriculum (www.wemsi.org) offered by providers such as the CDS Outdoor School (www.cdsoutdoor.com) are ideal for providers of all levels.

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### A NDMS Bestiary

**DMAT**
Disaster Medical Assistance Teams provide emergency and interim primary care when local medical resources cannot meet the need, or are themselves incapacitated. DMATs can set up a large tent-hospital freestanding emergency department, treating and releasing those with less serious problems, and stabilizing and transferring those needing definitive care or admission. DMATs require doctors, nurse practitioners and PAs, nurses, EMTs and medics, pharmacists, and many logistics and management personnel.
DMATs may also “backfill” an existing ED, or use a tent-hospital as a supplement to an existing but overwhelmed or damaged ED.
DMATs, both in terms of numbers of teams and number of personnel, form the bulk of the NDMS’s personnel.
A few DMATs are more narrowly focused:
- mental health
- pediatrics
- burns
- crush injury.

**USAR**
Urban Search and Rescue teams search disaster areas for survivors (and bodies), and provide heavy-rescue when needed. While not strictly speaking part of the NDMS (they are under FEMA but separate from NDMS), they have a limited medical component.

**VMAT**
Veterinary Medical Assistance Teams provide medical services to animals affected by a disaster.

**DMORT**
A Disaster Mortuary Operational Response Team can help provide temporary morgue facilities, and forensic dental pathology, and other forensic anthropology methods for identifying the deceased.

**NMRT**
The National Medical Response Teams are medical teams specifically designed to deal with nuclear, biological, or chemical situations.

**IMSuRT**
Although other NDMS teams are limited to domestic response, the International Medical-Surgical Response Teams are available to respond to foreign disasters.

**NNRT**
A National Nurse Response Team is designed to furnish large numbers of nurses when that is a specific need.

**NPRT**
National Pharmacy Response Teams are designed to respond when there is need for massive administration of vaccines or other medications for disease outbreaks.

Additional information on NDMS teams is available at: www.ndms.dhhs.gov