POSITION PAPER

NATIONAL ASSOCIATION OF EMS PHYSICIANS

LAW ENFORCEMENT SPECIAL OPERATIONS MEDICAL SUPPORT

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"Tactical EMS" (TEMS) is a term referring to nonmilitary emergency medical services (EMS) that have been modified for the realities of the tactical environment and is emerging as a new subspecialty with nationwide application in prehospital care.[1] It can be defined as the spectrum of services necessary to establish and maintain the health, welfare, and safety of special operations law enforcement providers, and refers to "tactical emergency medical *support*," rather than "tactical emergency medical *services*," recognizing the broad spectrum of health services beyond acute care. The goal of TEMS is to help the tactical team accomplish its mission. This is achieved by keeping the team members healthy before, during, and after operations by providing preventive, urgent, emergent medical, and, in some cases, dental services.

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Few prehospital providers and fewer medical directors are knowledgeable of the unique attributes and skills necessary to safely and effectively function in this potentially hostile and functionally austere environment. The objective of this paper is to discuss the roles and responsibilities of TEMS providers.

POSITION

The National Association of EMS Physicians (NAEMSP) endorses the concept of integrating EMS capability into law enforcement special operations, including tactical emergency medical support (TEMS). The providers must be trained in the provision of preventive, urgent, and emergent medical care of patients in a functionally austere environment. Furthermore, they should be proficient in the preparation of operational medical plans and have a working knowledge of law enforcement special operations procedures.

The NAEMSP supports the creation of educational standards that meet the needs of field medical providers in this environment. A TEMS core content should be developed, validated, and implemented into a national model scope of practice. Instruction should be based on scientific data. A certification process should be developed to ensure proficiency in the medical and administrative skills established by the standard curriculum.

The NAEMSP concurs with federal, state, and local government authorities in that a licensed physician must ultimately supervise every EMS provider. Hence, the NAEMSP believes that medical oversight through physician involvement is required of any EMS personnel assigned to support law enforcement special operations. The NAEMSP supports the development of a standard medical director's continuing medical education curriculum designed to prepare physicians to provide this specialized medical oversight.

The NAEMSP supports the development of relevant basic and clinical research aimed to answer the questions surrounding the provision of preventive, urgent, and emergent medical care in the special operations law enforcement environment.

The NAEMSP supports states' recognition of the unique scope of practice of EMS providers supporting law enforcement special operations. This includes the provision of preventive and urgent medical care to operationally impacted persons.

DISCUSSION

Tactical EMS began as medical support to tactical law enforcement teams, but has since expanded to include the provision of medical support to all law enforcement special operations. Based on the model of medical support to military spe-

cial operations, the concept of TEMS followed the development of Special Weapons and Tactics (SWAT) teams in civilian law enforcement agencies. Just like their military counterparts, it was apparent that a special type of medical support package was required to keep these teams operationally effective. In 1989 and 1990, representatives from law enforcement, emergency medicine, and EMS systems held national conferences to develop consensus relating to the provision of medical support to tactical teams.[2,3] From this consensus, training programs were developed to meet the needs of TEMS providers. In 1993, the National Tactical Officers Association issued a position statement paper in support of TEMS, stating:

> The provision of TEMS has emerged as an important element of tactical law enforcement operations….

Several issues affect the composition and size of each TEMS team, including the type of support needed by the law enforcement agency, local politics, and liability issues. Ideally, a TEMS team should be able to provide the full complement of medical care, to include preventive, urgent, and emergent medical services. Hence, the ideal TEMS team is composed of a combination of TEMS providers, including seasoned emergency medical technicians, paramedics, EMS nurses, and physicians trained in out-of-hospital emergency care or military medicine. Each of these professionals brings essential practice methodologies and experiences to the team.

The goal of TEMS, to keep the team operationally ready from a medical perspective, is the reason why the scope of practice of TEMS providers may extend beyond the scope of traditional EMS. Tactical EMS providers establish and administer preventive medicine programs in order to keep the team healthy. Moreover, they handle routine medical problems to prevent possible performance decrement, and they provide immediate care to casualties in nonsecured areas. Also, in addition to providing patient care, TEMS providers use their basic training in forensics and medical intelligence data gathering and analysis to assist the incident commander in executing a successful law enforcement operation.

Prevention

Preventive medicine activities are an extremely important aspect of TEMS. The military has long recognized the importance of controlling disease and non-battle injury to maintain operational capability. Informal analyses of case reports from extended SWAT, military, and other TEMS operations have illustrated how some of the nontraumatic medical problems seen in these types of operations, such as food- and water-borne illnesses and sleep/wake cycle disturbances, may be prevented.[4]

The preventive medicine efforts in TEMS are ongoing. Even before a mission is assigned, TEMS providers make sure that the team is medically ready by identifying and immunizing those individuals in need of immunizations, and by verifying that each operator has a completed baseline medical information form on file with the medical support team or in his pocket. This activity is integrated with the existing, if any, occupational health program of the supported agency and helps decrease the logistical burden on both the team and the occupational health office. The TEMS provider may suggest to the occupational health office the need for immunizations that are not routinely administered to law enforcement personnel, i.e., hepatitis B.

In the preplanning phase of a specific operation, TEMS providers are required to prepare an assessment of the medical threat. This includes training exercises since national data show that most injuries to tactical operators occur during training.[5] The Medical Threat Assessment (MTA) includes an assessment of the threat created by the environment, terrain, flora, fauna, potential weapons and booby traps, and hazardous materials. Furthermore, this document includes information related to the location, the provided services, and the best avenue of approach for hospitals near the area of operations as well as the capabilities of the local EMS system. Tactical EMS providers analyze this information and make recommendations to the incident commander, functioning as the commander's "medical conscience." These recommendations may include necessary personal protective equipment, hydration requirements, and medical evacuation plans.

The preventive medicine tasks in TEMS do not stop with the onset of the execution phase of an operation. Tactical EMS providers recognize that it is imperative that all tasks aimed to prevent injury and illness are continued throughout the operation. Prevention of heat- and cold-related casualties, prevention of food-borne illnesses, and monitoring performance decrement due to lack of sleep are some of the tasks TEMS providers perform during the execution phase of an operation (especially in extended operations).

The resolution and evaluation phases of the operation present new preventive medicine challenges to the TEMS providers. It is during these two phases that the TEMS providers pay special attention for the onset of signs of incident-related stress in the team. However, it is important to recognize that not every operation leads to incident-related stress and thus not every operation needs to be followed by a critical incident stress debriefing. Operations where law enforcement officers, hostages, or bystanders are injured and where gruesome crime scenes are found by the operators are those in which

incident-related stress is most likely to occur. Casualties of incident related stress are treated with immediacy, expectancy, and in close proximity to the location of their peers based on the proven military model of treating battle fatigue.[6]

Urgent Care

Urgent care issues center around maintaining optimum performance during an operation by treating acute onset nuisance or minor medical problems that can significantly impact a highly skilled operator. While not intended to replace routine medical care by a primary care provider, the ability to provide limited, contemporaneous medical services maximizes the efficiency of the special operations team by keeping the operators functional until the resolution of the incident. Examples include treating the countersniper who has a flare-up of his or her environmental allergies and cannot see through his scope due to tearing and itchy eyes, or a tactical operator complaining of dental pain because he or she just broke a tooth while getting into the raid van.

Emergency Care

While the provision of preventive and urgent care constitute the majority of the TEMS provider's activity, the ability to effectively treat a casualty during an ongoing operation is the true test of the provider's mettle. Military data suggest that 80% of those who die from penetrating trauma do so within 30 minutes of wounding, and 20% die from readily treatable causes: tension pneumothorax, exsanguinating peripheral hemorrhage, and airway obstruction. Thus, there is a demonstrated need for immediate, lifesaving interventions in penetrating trauma.[7] Furthermore, the use of conventional EMS is considered inadequate due to the lack of preplanning or medical direction for TEMS operations, and the issues raised concerning operational security.[8–10] When an injury occurs, the incident commander asks the TEMS providers to address the situation. His or her instruction may be to obtain information regarding the casualty's condition from a distance using binoculars, night vision goggles, or radio communications, and report the assessment back to the command post. Determining whether a casualty is breathing, can follow commands, and can move, and where the injuries are located, all affect the decision to execute a rescue. Alternatively, the incident commander may request an immediate rescue of the casualty as allowed by the tactical situation. It is the commander's responsibility to determine how and when the TEMS providers or other team members should attempt to rescue and evacuate a casualty.

The immediate goal of every medical rescue is the rapid evacuation of the casualty from locations exposed to direct fire to areas of cover where medical care can be provided. Ultimately, the goal is to rapidly evacuate the casualty to a secured zone. Therefore, all medical procedures that may delay the evacuation are postponed until the casualty has been moved to an area of cover. This may be the side of a tree or a vehicle. The rapid evacuation principle also applies to intubations, gaining venous access, spinal immobilization, splinting, wound dressing, and medication administration. Because of the functionally austere environment where medical treatment will be provided, enhanced or special skills may be necessary to provide lifesaving care in a hostile environment. Techniques such as digital orotracheal intubation, laryngeal mask airway, and surgical cricothyrotomy are important for airway management, as is the early use of tourniquets for severe peripheral hemorrhage.

Barricades and hostage incidents, where a casualty cannot be seen, present a special challenge to TEMS providers. Assessment and management of this casualty's wounds or illnesses are difficult, but not impossible. The TEMS providers, aided by the hostage negotiators, can use telephone or radio communications to communicate with the hostage taker and the casualty. Tactical EMS providers use interview techniques similar to those used by emergency medical dispatchers to assess the condition of the casualty. Furthermore, medical care instructions are given over the radio or phone to the hostage taker, casualty or other hostages.

Incidents involving weapons of mass destruction or clandestine drug laboratories present another special challenge to TEMS providers. Operators that are accidentally or intentionally (e.g., booby trap) contaminated with any potentially toxic substance or material must be decontaminated. Tactical EMS providers may perform the decontamination while caring for any concurrent life-threatening injury since traditional hazardous materials units are not usually permitted in the area of operations. The hasty decontamination procedure performed by TEMS providers is followed by a traditional decontamination when the casualty is evacuated to secured areas or the hospital.

Tactical EMS providers also fulfill the role of patient advocate when a law enforcement officer is evacuated to a hospital. At least one TEMS provider accompanies the operator to the hospital. The TEMS provider makes sure that a copy of the casualty's medical and surgical history is taken to the destination hospital and can provide invaluable information regarding the mechanism of injury, and prior treatment. In the emergency department the TEMS provider performs the role of liaison for the supported law enforcement agency and the operator's family. He or

she can help keep the operator's family, teammates, and agency apprised of his or her condition by serving as the conduit between the hospital and the multitude of personnel who invariably arrive at the emergency department after an officer is injured, thereby decreasing the burden on hospital staff.

CONCLUSION

The practice of TEMS is an important service provided by EMS agencies and is growing. This is due to the fact that law enforcement agencies and EMS providers now understand the benefit of working together to keep the team healthy. Furthermore, they understand the potential outcome benefits when medical personnel skilled in working in the special operations law enforcement environment are deployed at the site where casualties are most likely to occur.

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