

# Resident Involvement in Civilian Tactical Emergency Medicine

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## Abstract and Introduction

### Abstract

**Background:** Tactical emergency medicine services (TEMS) has emerged as a specialized niche within the field of emergency medicine. With increasing demand for physician participation in civilian tactical teams, there will be efforts by residents to become involved at earlier points in their clinical training. **Objectives:** This article discusses resident involvement with a civilian TEMS unit and provides five maxims for emergency physicians to better understand the difference between working in the emergency department or with emergency medical services vs. in a TEMS environment. **Discussion:** Differences between TEMS and other trauma life support models, institutional and political barriers likely to be encountered by the resident, the value of preventive medicine and the role of the physician in long-term tactical operations, opportunities for subspecialty growth, and the role of operational security are all discussed in detail. **Conclusion:** Tactical emergency medicine is a specialty that utilizes the full array of the emergency physician's skill set. It is also a field that is ripe for continued expansion, but the resident looking to become involved with a team should be aware of the requirements necessary to do so and the obstacles likely to be encountered along the way.

### Introduction

Interest in prehospital care research continues to grow within emergency medicine (EM), and the operational boundaries of its providers are continually being pushed further outward. Indeed, for many of us in the field, potential involvement in this earliest phase of care—with television images of lifesaving in-field cardiac defibrillations, racing ambulances, and medical helicopter evacuations in our minds—was one of the most alluring calls to join the ranks of emergency physicians, with the goal that we too would practice the best medicine "anywhere, anytime."

As the number of training programs in emergency medicine has grown, so too has the number of subspecialty areas within the field. One such niche is tactical emergency medicine services (TEMS), herein defined as the provision of emergency medical support to civilian law Special Weapons and Tactics (SWAT) and military special operations units. Importantly, this care encompasses not only that provided while under active fire, but also includes the preventive and primary care that takes place before combat ever begins. One study showed that among SWAT teams specifically, there were approximately 1.8 officer casualties, 18.9 injured perpetrators, and 3.2 injured bystanders per 1000 officer missions.<sup>[1]</sup> These statistics indicate a need for close medical support when these types of inherently dangerous operations are taking place.

Traditionally, the involvement of physicians in this area of medicine, and especially in the training for such participation, has come at the fellow or attending level. Currently, some emergency medical services (EMS) and occupational medicine fellowships include involvement with a TEMS team as an option for those interested. But, as former tactical medic and Surgeon General Richard Carmona pointed out, tactical medicine is a field that is likely to grow over the next few decades, and as that expansion occurs, it is likely that residents will try to become increasingly involved at earlier points in their postgraduate training.<sup>[2]</sup> A recent study by Bozeman et al. illustrates this point by showing that approximately 18% of U.S. emergency medicine residency programs now include some exposure to tactical medicine as part of their curriculum.<sup>[3]</sup> As such, this expert opinion article describes five maxims derived from one emergency medicine resident's experience with civilian tactical medical care. It is neither a clinical study nor a structured literature review, but rather an opinion piece intended to help emergency medicine residents and emergency physicians better understand the difference between

conventional prehospital and inpatient emergency medicine and that of tactical emergency medicine.

## Discussion

### Maxim #1: TEMS is not "ATLS in the Field"

It would be easy to assume that as physicians specially trained in the field of emergency medicine, emergency medicine residents are already well versed in the actual "medical" components of TEMS. However, it is a naïve thought that just because we have run enough resuscitations, intubated enough patients, and put in enough chest tubes to be experts in advanced trauma life support (ATLS) and the management of critically ill patients, that we are fully prepared for medical emergencies in the tactical environment. This line of thinking is dangerously incorrect, and as others have stated before, "it is unsafe for emergency medical personnel to be brought into this complex and dangerous environment without proper training".<sup>[4]</sup>

TEMS and the provision of "tactical combat casualty care" (TCCC) represent a wholly new paradigm in the management of patients acutely injured *outside* the hospital in combat situations, just as advanced cardiac life support (ACLS) and ATLS guide the management of patients *inside* the hospital (Table 1). Failure to recognize this single most important distinction not only can result in providing suboptimal care to patients ranging from injured officers to innocent bystanders, it also runs the risk of placing the physician and other team members at increased risk of injury and harm.

**Table 1. A Comparison of Advanced Trauma Life Support vs. Tactical Emergency Medical Support**

	ATLS	Civilian TEMS
Source	American College of Surgeons	United States Military, TCCC
Priority	Save every life	Achieve law enforcement objectives
Operators	Physicians, nurses, respiratory support; team approach	Paramedics, physicians, police officers; often single operator
Location	Hospital based	Out of hospital, three distinct stages
Mnemonic	"ABCDE"	"MARCH"
Interventions	Airway: chin lift, jaw thrust, nasal and oral pharyngeal airways, LMA, intubation, surgical airway	Care under fire: in the hot zone, under hostile fire; tourniquet use only, no airway interventions
	Breathing: needle decompression, chest tube placement	Tactical field care: in the warm zone out of direct fire; hemorrhage control and airway support, needle decompression (no chest tubes), fluids, antibiotics, analgesia
	Circulation: crystalloids, blood products	Casualty evacuation care: during evacuation and out of the immediate scene; hemorrhage control, definitive airway management, chest tube placement, fluids, antibiotics, analgesia, preparation for surgical intervention
	Disability: immobilization, fluids, vasoactive medications, steroids	

Exposure: remove all clothing, inspect all orifices, cover with warm blankets
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ATLS = Advanced Trauma Life Support; TEMS = Tactical Emergency Medical Support; TCCC = Tactical Combat Casualty Care; ABCDE = Airway, breathing, circulation, disability, exposure; MARCH = massive hemorrhage, airway, respirations, circulation, head injury; LMA = laryngeal mask airway.

But what is TCCC? Introduced in the mid 1990s, it is a set of guidelines developed by the U.S. Special Operations Command that were designed for the treatment of injured special operations soldiers in the combat theatre. It is now being increasingly incorporated into regular infantry units in addition to the civilian tactical law enforcement sector. Although the full guidelines are beyond the scope of this article, a brief overview is warranted. Under TCCC, tactical medicine is divided into three stages:<sup>[5, 6]</sup>

1. "Care under Fire" is battlefield care in the "hot zone," while under hostile fire, with only a small aid bag for equipment.
2. "Tactical Field Care" is therapy provided once the casualty and his or her unit are out of direct hostile fire, now in the "warm zone," and is limited to equipment carried into the field.
3. "Casualty Evacuation Care" (CASEVAC) is treatment provided during evacuation from the immediate scene and includes a much wider range of equipment and interventions.

Without proper training and repeated practice, the skills that go into providing care in each of these settings will deteriorate the same way that ACLS and ATLS provider skills decline if not practiced with enough frequency.

**Care under Fire.** This first stage is designed to provide guidance to the medic on scene when hostile fire is still present. It is devoted to control of a situation through firepower superiority long enough to keep the casualty or casualties from sustaining additional wounds and to stop life-threatening external hemorrhage through the use of specific TCCC-recommended extremity tourniquets. It is not commonly known by those not involved in TEMS that tourniquets have now re-emerged as the standard of care in this environment due to their ease of use, rapid application, and complete stoppage of blood loss.<sup>[5,7,8]</sup> No attempts at airway control or breathing assistance are made during this stage. This first step marks an important distinction between the civilian ATLS "ABCDE" resuscitation guidelines and the TCCC "MARCH" mnemonic discussed below.

Perhaps no point illustrates the difference between TCCC and ATLS better than the "MARCH" mnemonic that guides tactical medical care: "M" (massive hemorrhage), "A" (airway), "R" (respirations), "C" (circulation), and "H" (head injury). This differs from the "ABCDEs" of ATLS. This guideline is based on a repeatedly validated Vietnam-era study of preventable combat deaths, which showed that exsanguination from massive extremity wounds was the leading cause of preventable death among combat troops.<sup>[9]</sup> For that reason—because the incidence and prevalence of survivable exsanguinating extremity wounds is so much higher than airway-compromising injuries on the battlefield—greater emphasis is placed on hemorrhage control at the expense of immediate airway control. This difference also takes on greater importance when, as a tactical medic, one may be working as a single operator. Emergency physicians working in a trauma center become accustomed to having a multi-member team of physicians, nurses, and ancillary personnel assisting with a resuscitation, which allows for multiple interventions to proceed simultaneously. When operating as a single care provider, at times while under fire, the importance of practicing and providing vital skills under clearly delineated guidelines becomes all the more essential.

**Tactical Field Care.** Once out of the direct threat of hostile fire, TCCC guidelines state that a patient with altered mental

status should first be disarmed (to avoid having the injured victim in a confused state mistake the medic for an enemy and shoot the caregiver by accident), massive hemorrhage should be controlled, and better attempts at airway management should be made. In contradistinction to ATLS, however, the sequence of recommended interventions in military TCCC includes a: 1) chin lift/jaw thrust maneuver; 2) placement of nasopharyngeal airway; and 3) execution of a surgical cricothyrotomy if the first two interventions fail to provide adequate air flow. It is important to note that intubation is not present anywhere in the military algorithm at this stage of care. The risk of exposing one's position under low light conditions by using a lighted laryngoscope, or the risk of subsequent tube dislodgement are both reasons not to intubate at this stage. In contrast to the military, some civilian protocols do include intubation as an acceptable intervention if the scene can be secured. Once the airway has been managed, control of the patient's breathing status should be attained. Needle decompression for tension pneumothorax, and placement of an occlusive dressing over a sucking chest wound are the only two interventions allowed here. Again, it is worth emphasizing that placement of a definitive chest tube is not an option at this stage, another important distinction between TCCC and ATLS. Chest tubes placed in this setting are prone to infection, dislodgement with patient movement, and greater tissue injury, whereas pig studies show that needle thoracostomy can prevent the formation of a tension pneumothorax for up to 4 h.<sup>[5, 10]</sup> Next, stabilization of bleeding through the use of combat tourniquets, pressure dressings or combat bandages, and hemostatic dressings is recommended, followed by placement of a peripheral line by intravenous (IV) or intraosseous (IO) access if necessary, fluid resuscitation, and prevention of hypothermia through the management of exposure and use of heating blankets. This stage of care terminates with the provision of onsite antibiotics, monitoring of vital signs, and administering pharmaceutical analgesia, if possible.

**Casualty Evacuation Care (CASEVAC).** Once the casualty has been removed from the scene and is either en route to a higher level of care or has already arrived at such, there are some changes from the tactical field care guidelines. Massive hemorrhage is still controlled first, followed by airway control. Here, the algorithm recommends: 1) chin lift/jaw thrust; 2) nasopharyngeal airway placement; 3) intubation or laryngeal mask airway/Combitube/King airway; and 4) surgical cricothyrotomy as a last resort. Note that at this point, efforts are made to establish definitive airway control using any and all tools available. Breathing is supported by pneumothorax decompression with chest tube placement if necessary, bleeding is controlled with tourniquets, hemostatic agents are administered, preparations are made for surgical intervention if necessary, and access is obtained by IV or IO methods. Fluid resuscitation is initiated, hypothermia prevented as before, and antibiotics and analgesia provided as available.

*Residency training.* Because TCCC is not a part of the standard residency curriculum, training in this field of study needs to come from extracurricular sources. Although many tactical medics have certainly learned "on the fly" by training and practicing with their units over the years, the proliferation of multiple "tactical medicine" courses around the country—most notably since the original federally funded Counter Narcotics and Terrorism Operational Medical Support (CONTOMS) was discontinued—provide a forum for those interested to learn these specialized skills during a dedicated period of study. Although each of these courses has its own curriculum, most are rooted in the original CONTOMS structure and borrow heavily from that material. The specific skills to learn in these courses can be split into two different categories: medical skills and tactical skills. The medical component includes but is not limited to the quick application of combat tourniquets, proper needle chest decompression, use of various hemostatic agents and dressings, traditional and non-traditional intubation techniques, and the care of injured law enforcement or military K9s (canines who are considered sworn officers). And although no other course can substitute for SWAT Basic and Advanced courses, it is important for the resident walking away from one of these courses to have some exposure to certain tactical skills, including basic tactical team movements, usage and disarming of team members' weapons systems, exposure to different non-lethal weapons systems and their medical effects—CS (2-chlorobenzalmalonitrile) tear gas, for example—and team design and command structure.

## **Maxim #2: Know the Landscape and Know Your Role**

**Few Models Exist.** An early study in 1995 examined the prevalence of physicians on civilian SWAT teams and found that out of 73 teams surveyed, only seven had team physicians.<sup>[11]</sup> Fortunately, that statistic is improving. A recent 2008 study by Gildea and Janssen showed that approximately 48% of U.S. civilian tactical teams now utilize physician involvement; 81% of that percentage of physicians reported responding to callouts.<sup>[12]</sup> Within the actual "callout" to an operation, however, there are few studies that discuss the position and role of the physician. Anecdotally, most physicians report that they participate in non-combat roles by advising at the scene tactical operations center, supervising team training exercises, and providing health maintenance and low-acuity sports medicine advice. Very few physicians reported being part of entry teams. In the study by Bozeman et al., only three residency programs around the country allow their residents to carry firearms, while the remaining programs explicitly prohibit them.<sup>[3]</sup> With that in mind, it is clear that there are no models for residency programs actively training residents in this specialized area of medicine. Multiple, broad questions that range from "what level of commitment for a resident is possible?" to "what exactly is the role of the team physician?" may all be answered with great variability between existing examples as well as very little precedent. Due to this institutional inexperience, all residents interested in becoming involved in tactical medicine need to be highly motivated and capable of designing their own involvement with additional close consultation from their residency program directors. That consultation can be helpful to the resident in overcoming the many obstacles—institutional, financial, and potentially political—that will likely present themselves when first becoming involved with a team.

**Know the System.** Although residents grow accustomed to the complicated internal hospital dynamics that govern our work every day, TEMS work with a community SWAT team is governed by a completely different set of interdepartmental relationships and hierarchies. Often, the tactical "medical" unit is only a branch of the greater SWAT team made up of several other branches and groups that include entry officers, bomb squad personnel, SWAT technicians, and negotiators. Unless the city medical director or someone else of authority is able to facilitate an introduction with the TEMS medical commander, residents may need to make their own contacts with the different team leaders. The resident looking to be involved must recognize this and take the time to learn about the structure of the different fire, police, and EMS systems for the jurisdiction. Of significant importance is whether the community's EMS personnel are members of the fire department, a unified fire/police/medic municipal department, or possibly even are independent contractors paid by the city. Heiskell and Carmona have written extensively on this topic.<sup>[4]</sup> Because successful involvement requires a close working relationship with both the head of the tactical medic unit and the commander of the SWAT unit, knowing who directs each unit and that person's level of interest in having a resident on the team is of key importance.

Furthermore, it is worthwhile to learn who the SWAT medics (or SWAT Team supporting paramedics) are by their training backgrounds. Without any national standard, there is considerable variability in the experience of TEMS operators and even greater variability in the manner in which the medics are integrated into their respective SWAT teams.<sup>[4]</sup> One common model utilizes unarmed paramedics who train to deploy with the team. Depending on a particular SWAT team's policies, these paramedics may or may not enter a hot zone, but are typically accompanied by an armed police escort whenever they do so. A second model existing in some cities features paramedics who have actually gone through their respective police academies and SWAT training courses to become sworn police officers in addition to their role as medics. And still a final common model features members who were police officers first, and have then subsequently trained in Basic Life Support, ACLS, and ATLS. Knowing these backgrounds becomes important when a resident is assessing the initial possibility of operating with a SWAT team. If the TEMS unit members are all sworn police officers, that unit initially may be less welcoming to a resident without any law enforcement background than would a unit that utilizes personnel who are primarily paramedics and have subsequently trained with the team. There are several reasons for this, but most important is the ability of the resident to assist in the medical component without significantly degrading the ability of the team to complete the mission. Different than working in a hospital, being part of a TEMS unit does not necessarily mean that saving every life is the most important priority—with all of these units, the overarching theme is that the greater law enforcement mission comes first. Accepting that difference can run counter to our traditional training as physicians, in which the mission is to save every life possible, every day. But until the physician is trained and able to effectively operate as part of the tactical unit within the framework of the law enforcement objectives, the physician's presence may endanger

the mission, the team members, and the physician's own safety.

**Know Your Role and Your Liability Protection.** Although one may have more medical training than other team members, it is absolutely crucial for the physician to understand that that knowledge never outranks the years of experience that the TEMS commander and SWAT unit commander possess. It is important to note that for the medic, operational supervision follows two chains of command: one from the TEMS commander and the second from the SWAT unit commander. In order for the team to function effectively, there must be both a memorandum of understanding in place between the two units, and also a shared vision so that information flows freely in an efficient manner. Before any operation ever begins, the medic must know which actions to take and from whom to take instructions, so that the chain of command is not breached.<sup>[13, 14]</sup>

As exciting as involvement with a TEMS unit can be, it is important to remember that residents are likely to be, at most, simply volunteers with a team, and to realize that because they are not employees of the city, it is likely they will not be covered by the city's liability and injury protection and insurance programs. Before engaging in any activity with the team, whether simply training or actively engaging in an operation, it is paramount that a memorandum of understanding is in place between the city and the resident's hospital and department regarding participation. Although many participating physicians choose to assume that any malpractice will be dismissed under "Good Samaritan" laws, malpractice coverage should be discussed with the residency director and other involved parties. Should a resident render medical care on scene and the patient have an unfavorable outcome, an understanding of what kind of liability protection is in place will be very important. Additionally, in the case of injury, whether just a simple sprain while training or something more dangerous (such as being shot), it is essential to know what injuries the physician's health policy will cover. One can imagine a potentially financially catastrophic scenario in which a serious, but not life-threatening, injury occurs to the resident who is not covered by health insurance, and this leaves the resident in insurmountable debt. Clearly, it is advantageous to sort out these issues before they become more immediately important.

### **Maxim #3: Understand the Value of Preventive Medicine and Long-term Operations**

Frequently, the physician who has an interest in TEMS also has some desire to be an armed medic of the team participating in a hot zone entry; that is, to be an active operator with the SWAT officers. The reasons are clear: it presents an exciting adrenaline rush and offers a completely different set of challenges than those encountered during the average hospital day. But, as much as that desire for adventure exists, it is also equally important to realize that a physician's true value to the team is in two areas outside the traditional hot zone: preventive medicine and longer-term operations.

Within the guidelines of TCCC, and specifically in the "care under fire" and "tactical field care" settings, there is not any single activity that cannot be performed by a paramedic; even the two most advanced procedures, cricothyrotomy and needle chest decompression, are well within the purview of the paramedic skill set. The extra skills and knowledge that a physician possesses, such as central venous access or chest tube placement, have absolutely no role at these stages. And because these two stages typically occur in the hot or warm zone, it forces the rhetorical question of whether a physician ever really needs to enter into these more dangerous areas at all. Is the physician more of a liability than an asset here? Some would argue that the most effective use of the physician's skill set would be for the paramedics to physically remove the casualties from the tactical field care setting into a CASEVAC setting—an ambulance perhaps—where a physician could then perform the more advanced procedures necessary that are beyond paramedic level skills. Still others, however, would argue that it may not always be possible to evacuate the patient immediately, and CASEVAC-level care may need to be initiated before transport is available, if the scene can be secured. As such, it is preferable to have a physician in the role of an entering medic. At this time, current literature and discussion do not seem to provide a clear consensus on this issue—ultimately, it is a decision that is made between the SWAT team and TEMS commanders on an individual team basis.

**Preventive Medicine.** What the TEMS physician does have, however, is an expansive knowledge base that can be used to keep the team operating in peak condition. For instance, should the team elect to allow the physician to have access to team members' health records, the physician will have a greater understanding of each team member's underlying health conditions and whether certain medications or interventions may be indicated. Additionally, the unique ability that a physician has to prescribe medications allows intervention in a manner that a paramedic cannot achieve. Measures such as pharmaceutical assistance with tobacco cessation, management of immunization status, and closer monitoring of chronic conditions such as hypertension are easier to accomplish when a physician is detailed to the team. Additionally, physicians can perform annual physical examinations to search for any concerning signs or symptoms that may warrant further work-up.<sup>[15]</sup> The ability to streamline these preventive care measures holds down health care costs for the team and minimizes time lost to sick days by these important law enforcement assets.<sup>[16]</sup> Other advantages afforded by having a team physician include the on-scene assumption of medical control if necessary, the creation of a perceived sense of improved safety for officers and their families, improved coordination with area hospitals and physicians through personal relationships, and potentially an improvement in liability status for the SWAT team and the city, if it is known that the highest level of trained expert is immediately available on scene should something go wrong.<sup>[4, 12]</sup>

**Long-term Operations.** A second area where the tactical physician confers a relative advantage is long-term operations. Although these kinds of operations—those that last beyond 24 h in continuous duration—are much less frequent in the civilian relative to the military sector, they are not entirely implausible. For instance, the 1993 standoff at the Branch Davidian complex in Waco, Texas lasted for 51 days. Another, more recent example is the hostage crisis in Mumbai, India that also lasted for several days. In situations such as these, the long duration of an operation can influence health issues in a manner that requires the greater depth and breadth of knowledge that come from extended medical training.<sup>[17, 18]</sup> Here, the physician can take a lead role in two areas: the development of medical intelligence and operational assistance.

Medical intelligence encompasses the collection and integration of health-related information that can influence an operation's success. This information may include the analysis of any past historical medical information known about a suspect or hostages (prior psychiatric illness and its effect on rational thought formation, for example), and it can also include the assessment of the various types of hospital and health facilities that are locally available. Answers to questions such as: "How far away is a level 1 trauma center?," "How are patients going to be transported (by ambulance or air)?," and "What are the relevant contact numbers for the local emergency departments?" are all data that the tactical physician should collect and have readily available. As the popular 5-P adage notes, "prior planning prevents poor performance."

The second area of expertise, operational assistance, includes opportunities to assist in remote patient assessment and care, as well as the development and interpretation of health-related information as it becomes available in real time. For instance, if the TEMS physician is able to use binoculars to visualize an injured person, a wealth of information can be learned about the acuity of the patient's injuries from the scene: amount of blood loss, behavior (awake vs. unconscious), and type of injury (minor vs. major). Information can be relayed to the SWAT team commander about the acuity of the injuries to casualties on scene and whether the completion of the mission is necessary—from a medical standpoint—in a shorter or longer period of time.<sup>[4]</sup> The physician may also direct and instruct some measure of patient care across a police radio—by communicating with injured parties, the physician can direct the techniques of direct wound pressure, placement of occlusive dressings, or oral rehydration. And finally, as a negotiator obtains information about a suspect (do they abuse drugs or smoke cigarettes?, for example), if requested, the physician may be able to use some of that information to inform a SWAT team commander on the risks of certain tactics. One example would be the caution a physician may express to the commander in the use of CS tear gas vs. explosive flash bangs or other tactics if it is known a suspect has reactive airway disease.

Thus, it is in the integration of this large body of medical information that the physician may prove most beneficial. Although not offering as much of an adrenaline rush as making an entry into a hostile scene, these operations are about mission success and the role of teamwork in achieving it more than anything else.

#### **Maxim #4: The Field of TEMS is in Development with Plenty of Opportunity for Growth**

As former U.S. Surgeon General Richard Carmona noted in 2002, "most TEMS and tactical practices are based primarily on anecdotal evidence and not rigorous scientific review".<sup>[2]</sup> He noted in that same article that issues about medical control in the field, the best equipment, and how to efficiently select and train the best providers and operators are questions that still lack clear answers. His recommendation was to develop the field through evidence-based research and application of the scientific method to drive "practices both in TEMS and tactics".<sup>[2]</sup> For the resident in training looking to become involved, this lack of a formal body of knowledge should not be viewed as a shortcoming, but instead as a potential opportunity for growth. The unfortunate events of 9/11 and the evolution of threats at home—both international and homegrown in nature—have created a need for the successful development of new medical techniques and approaches. It has also created a need for those able to develop and test new scientific hypotheses. In-depth analysis of prior operations, outcomes, and the different levels of success achieved provides an area for future research, and as those physicians with special training in these skills, emergency medicine residents can influence the field in a manner that improves safety and patient outcomes.

Funding for this type of research and extracurricular involvement is also available, particularly for those still in training. Potential sources of external funding include local area hospitals, local business, local EMS or fire agencies, state EMS grant processes, federal grant processes, and major medical equipment manufacturers.<sup>[13]</sup> Internally, the resident may be able to utilize individual resident education funds or a hospital grant. Because the operational tempo of most civilian SWAT teams is unlikely to slow down any time in the foreseeable future, there will remain a continuing demand for medical services and research. Emergency medicine residents and physicians should be well positioned to fill this role in addition to attracting funding from a wider range of sources not typically available to an exclusively paramedic TEMS unit.

#### **Maxim #5: Know Who You Represent and that Your Information May Be Inaccurate or Incomplete**

Many emergency physicians are used to making comments to the press about injuries sustained in a specific accident or about diseases in general that affect the community. These are usually low stress interviews and the physician is typically well prepared to provide an informed response.

At the conclusion of a law enforcement operation, especially one in which injuries have occurred, the TEMS physician may be asked to comment to the press. This is an opportunity to say as many positive things as possible about the expertise, training, and heroism of the team. But, unlike more routine emergency department interviews, it is important to be exceedingly circumspect and remember that statements made may have an impact on ongoing criminal investigations, operational security, and sources and methods used by the law enforcement team to obtain information. No comments should be made about the perceived guilt of a perpetrator, no justifications should be made over the use of force, and no specific comments on survivability should be made off the cuff. It is also important to remember that rumor, hearsay, and uncorroborated "facts" should not be commented upon. Many on-scene assumptions may later prove to be partially or totally erroneous. Simply using terms such as "victim," "alleged perpetrator," and "serious, potentially fatal injuries" is the most optimal language in complicated situations such as these when information is often incomplete. Commenting on expertise, professionalism, and heroism best serve all involved.

#### **Limitations**

The maxims above are derived from a single emergency medicine resident's experience with a civilian tactical law enforcement team after a year of training and after attending an extracurricular tactical medic course. The self-funded experience took place in a mid-sized urban city with a greater metropolitan population of approximately 1,000,000 people. These lessons are meant to serve as guidelines for other interested emergency medicine residents and physicians, but the experience of others may vary considerably with the size of the urban population, the operations tempo, and the structure of the tactical law enforcement team. As such, the lessons learned by other physicians may vary from those

detailed above. Certainly, further studies and opinions by these persons will contribute to the existing body of knowledge.

Additionally, the focus of this article is restricted to civilian tactical medical care and the law enforcement responsibilities and capabilities relevant to that sector. The author is not a military veteran, and the opinions above are limited in that regard. Although military tactical medical care is certainly a related entity, the mission and capabilities of the military are different than those of civilian law enforcement. Readers interested in learning more about medical care in that environment are referred to the body of literature relevant to that topic.

## Conclusion

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Tactical emergency medicine represents an ever-evolving branch of emergency medicine that is particularly ripe for young physician involvement. Perhaps one of the most exciting prospects is the opportunity to become involved with this subspecialty as it just now begins to become more formalized in training and practice. In that sense, it is very similar to the development of the larger specialty of emergency medicine, a specialty that has been in existence for only about 30 years. There is a strong need for participation in TEMS by emergency physicians who are interested in being involved. Physicians are capable of providing unique expertise and knowledge to a tactical team that cannot be obtained from other team members.

Before a physician becomes involved in tactical emergency medicine, however, it is important to recognize the differences between tactical medical work and the care that physicians provide in the hospital. Although they share the common goal of providing the best care to patients, the manner and tactics used to achieve that goal are very different. Taking the time to learn about these differences, as well as the potential pitfalls that one may encounter along the way, ensures that the experience will be much more fruitful for all parties involved.

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