

Emergency Department Patients Support the Use of Combat Medics in Their Clinical Care

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ABSTRACT

Background: As US military combat operations draw down in Afghanistan, the military health system will shift focus to garrison- and hospital-based care. Maintaining combat medical skills while performing routine healthcare in military hospitals and clinics is a critical challenge for Combat medics. Current regulations allow for a wide latitude of Combat medic functions. The Surgeon General considers combat casualty care a top priority. Combat medics are expected to provide sophisticated care under the extreme circumstances of a hostile battlefield. Yet, in the relatively safe and highly supervised setting of contiguous US-based military hospitals, medics are rarely allowed to perform the procedures or administer medications they are expected to use in combat. This study sought to determine patients' opinions on the use of combat medics in their healthcare. **Methods:** Patients in hospital emergency department (EDs) were offered anonymous surveys. Examples of Combat medic skills were provided. Participants expressed agreement using the Likert scale (LS), with scores ranging from "strongly agree" (LS score, 1) to "strongly disagree" (LS score, 5). The study took place in the ED at Bayne-Jones Army Community Hospital, Fort Polk, Louisiana. Surveys were offered to adult patients when they checked into the ED or to adults with other patients. **Results:** A total of 280 surveys were completed and available for analysis. Subjects agreed that Combat medic skills are important for deployment (LS score, 1.4). Subjects agreed that Combat medics should be allowed to perform procedures (LS score, 1.6) and administer medications (LS score, 1.6). Subjects would allow Combat medics to perform procedures (LS score, 1.7) and administer medications (LS score, 1.7) to them or their families. Subjects agreed that Combat medic activities should be a core mission for military treatment facilities (MTFs) (LS score, 1.6). **Conclusion:** Patients support the use of Combat medics during clinical care. Patients agree that Combat medic use should be a core mission for MTFs. Further research is needed to optimize Combat medic integration into patient healthcare.

KEYWORDS: *medics, Combat; medics, Special Forces; patients, emergency department; surveys*

INTRODUCTION

Background

The US military has seen an unprecedented amount of combat in the Joint Theater over the past decade. The large number of combat injuries has placed an emphasis on the importance of the Combat medic (68W) and Special Forces medic (18D) in care required to administer lifesaving treatments at the point of injury (POI). For the purpose of this paper, Combat medic refers to both the 68W and 18D military occupational specialties.

Recent studies have highlighted the importance of continual training to maintain our Combat medic force in a deployment-ready status.^{1,2} Predeployment training has been shown to be beneficial for Combat medic readiness.³ However, a limited amount of training can occur using simulations and live-tissue models. Thus, clinical experience must be a priority in the garrison setting. Ideally, training would occur as an ongoing process rather than a short predeployment course. Ongoing critical care experience has been linked to improved patient outcomes.⁴ Data suggest that there is poor adherence to Tactical Combat Casualty Care (TCCC) medication guidelines at the POI.⁵ It appears unreasonable to expect that medics will perform a procedure or administer a medication under hostile conditions that they have not been trained to do in a controlled setting.

Importance

US Army Medical Command (MEDCOM) regulation 40-50 and Army regulation 40-68 outline the use of Combat medics in the clinical setting. The regulations allow significant latitude in provider discretion on tasks that can be delegated to the medics. However, there

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appears to be a general hesitation on the part of the provider and the military treatment facility (MTF) to allow medics to function within the full scope of their skill set. To overcome this resistance, a letter was sent out to MTF leadership by MEDCOM in November 2012 and again in 2013 describing the MTFs as “. . . an extension of the battlefield,” and further emphasizing the goals of the MTF is for Soldier skills sustainment. Additionally, depending on the location, there may be competition among provider trainees to obtain procedural volume, thus limiting medic exposure. The exact reasons for the lack of medic use are not clear, as there appears to be no data on this topic. This study is intended to provide leading data for future research.

At Bayne-Jones Army Community Hospital, Fort Polk, Louisiana, where this study took place, the bulk of the medic’s clinical time is spent obtaining vital signs, intravenous (IV) catheter placement, administration of IV and oral fluids, and assisting in room turnover.

Goals of This Study

We wanted to determine how patients perceive medic use. To the best of our knowledge, this is the first study to survey patients’ perceptions of the use of Combat medics in their care.

Methods

This study was reviewed and approved by the institutional review board at the San Antonio Military Medical Center, which supervises all research occurring at MTFs under the Southern Regional Medical Command. The study was also approved by local command. A waiver of informed consent was requested and obtained.

This cross-sectional design survey study took place at Bayne-Jones Army Community Hospital, which is a small MTF in Ft. Polk, Louisiana, with approximately 23,000 visits per year. The patient population consists mostly of active duty Soldiers, dependants, and a small volume of retirees. The hospital also provides medical support for all units performing operational training at the Joint-Readiness Training Center.

Surveys were offered to all adult patients and adults who were accompanying minor patients upon checking into the ED. Patients were asked to complete the study and put it in a locked dropbox or to give it to a staff member. The study was completely anonymous. Patients were asked six questions that were answered using the Likert scale (LS). They responded on a scale of 1 (strongly agree) to 5 (strongly disagree). They were placed into four groups: active duty, dependants, retirees, other. Nonparametric analysis of variance methods were used

to compare differences in response to each question by respondent group. Examples were provided in the survey, such as IV access, administration of IV/intramuscular/nasal/oral medications, drainage of abscesses, suturing wounds, splinting broken bones, placement of urinary catheters, measuring vital signs, wound care management, chest compression, and placement of basic airway devices.

Results

The study took place from July 2014 through August 2014. During this time, 287 surveys were completed. Seven were excluded because they were incomplete, leaving 280 surveys for inclusion. The majority of those participating in the study were on active duty (51.1%), followed by dependents (36.1%), other (7.5%), and retirees (5.4%).

Table 1 lists the questions that were asked of patients. Patients agreed that medic skill maintenance is important for deployment (mean LS score = 1.4). Patients felt medics should be allowed to perform procedures (mean LS score = 1.6). Patients felt medics should be allowed to administer medications (mean LS score = 1.6). Patients would allow medics to perform procedures on their family members (mean LS score = 1.7). Patients would allow medics to administer medications to their family members (mean LS score = 1.7). Patients felt that medic clinical activities should be a core mission at MTFs (mean LS score = 1.6).

Table 2 outlines the average responses overall and by respondent group. The results suggest that average responses to each question did not vary significantly by

Table 1 Survey Questions

1. Combat medic skills maintenance is important for when they deploy.
2. I believe that Combat medics should be allowed to perform procedures within their skillset in the emergency department when a physician is supervising them.
3. I believe that Combat medics should be allowed to administer medications within their skillset in the emergency department when a physician is supervising them.
4. I would allow Combat medics to perform necessary medical procedures on me or my family members in the emergency department when a physician is supervising them.
5. I would allow Combat medics to administer medications to me or my family members in the emergency department when a physician is supervising them.
6. I believe that allowing medics to do activities within their skillset under physician supervision should be a core mission value for military treatment facilities.

Table 2 Response Scores by Group*

Question	Overall (N = 280)	Active Duty (n = 143)	Retiree (n = 15)	Dependant (n = 101)	Other (n = 21)	p Value†
1	1.4 (0.64)	1.3 (0.60)	1.4 (0.91)	1.4 (0.66)	1.3 (0.58)	0.153
2	1.6 (0.71)	1.5 (0.71)	1.5 (0.64)	1.6 (0.65)	1.8 (0.94)	0.324
3	1.6 (0.72)	1.6 (0.74)	1.7 (0.82)	1.7 (0.64)	1.8 (0.94)	0.458
4	1.7 (0.82)	1.8 (0.91)	1.7 (0.82)	1.7 (0.67)	1.7 (0.86)	0.931
5	1.7 (0.75)	1.7 (0.79)	1.7 (0.82)	1.7 (0.67)	1.7 (0.78)	0.803
6	1.6 (0.68)	1.6 (0.72)	1.4 (0.63)	1.6 (0.62)	1.6 (0.80)	0.449

Notes: *Data given as mean score (standard deviation).

†Nonparametric one-way analysis of variance (Kruskal-Wallis test).

respondent group. Table 3 outlines the number and percentage of responses by respondent group. Figure 1 shows the distribution of responses by LS categories.

Discussion

This study highlights several factors that must be considered by supervising providers. At the study site, there are specific policies prohibiting medics from performing many TCCC activities. This suggests there is significant

hesitation from the staff and providers in allowing the Combat medics to perform duties within their skillset. Activities like basic lifesaving procedures or medication administration are rarely performed by the medics when functioning at military hospitals (personal communication with US Army ED chiefs, June–August 2014). Various reasons are often cited, including the Joint Commission regulations, medicolegal liability, patient safety, and encroachment onto nursing duties. However, at this time, it does not appear these are grounded in regulation

Figure 1 Distribution of Responses by Category.

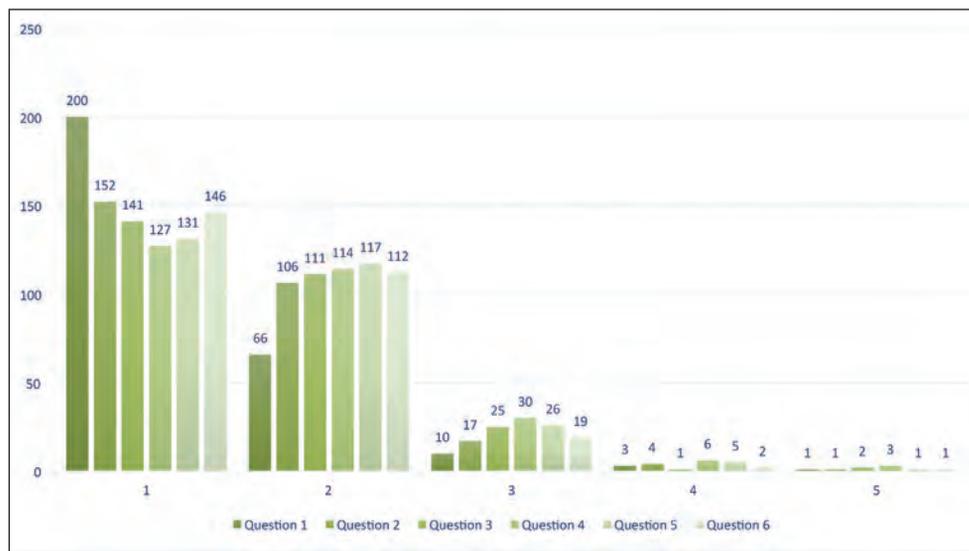


Table 3 Responses by Question Number and Answer*

Question	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1	71.4 (200)	23.6 (66)	3.6 (10)	1.1 (3)	0.4 (1)
2	54.3 (152)	37.9 (106)	6.1 (17)	1.4 (4)	0.4 (1)
3	50.4 (141)	39.6 (111)	8.9 (25)	0.4 (1)	0.7 (2)
4	45.4 (127)	40.7 (114)	10.7 (30)	2.1 (6)	1.1 (3)
5	46.8 (131)	41.8 (117)	9.3 (26)	1.8 (5)	0.4 (1)
6	52.1 (146)	40.0 (112)	6.8 (19)	0.7 (2)	0.4 (1)

Note: *Data given as % (No.).

or data. The military has a unique mission that is not comparable to any civilian facility in the United States and thus applying civilian standards is inappropriate.

Medics obtain a wide variety of training during military indoctrination, but little of this is used in the garrison setting. The military expects medics to perform all these duties competently in the deployed setting. This incongruence in the use of Combat medics in the deployed setting versus the contiguous US MTF setting is potentially detrimental to combat casualty care.

The importance of various procedural skills has been clearly demonstrated throughout the course of the Iraq and Afghanistan campaigns. Medics are often expected to perform their duties in remote areas without any direct supervision available. The conditions under which they must perform these duties require the utmost competency. Common procedures such as wound care management, medication administration, splinting, vital sign measurements, suturing, and vascular access are recurring procedures that can be delegated to the medic with provider training and supervision to enhance related battlefield skills. Less-common procedures, such as placement of airway devices, have direct benefit to saving lives on the battlefield and may be useful for the medics to perform in the garrison military hospitals.⁵ This data set demonstrates that patients support using medics for job-specific tasks.

There is a growing body of medical professionals pushing the aviation safety model into medicine.⁷⁻¹¹ Pilots in training undergo simulation training followed by a substantial number hours of actual flight under the direct supervision of a more experienced pilot. The time to train a fighter pilot takes even longer. Comparatively, all 50 states require that a physician have at least an internship prior to practice and it is increasingly uncommon for a physician to practice without a residency. The reason for this training under both direct and indirect supervision is the growing complexity of modern medicine. If this level of supervised and controlled training is required of aviation and medical professionals, then similar actions should be afforded to the Combat medics who will be expected to perform lifesaving tasks on the battlefield. Much of the training for medical practice is based on repetition of cognitive and procedural actions.

As healthcare costs continue to grow, we must seek innovative measures to provide high-quality healthcare and find targeted methods for cost savings so that money may be allocated to prioritized activities. Understanding the importance of maintaining a deployment-ready Combat medic force requires actively engaging in clinical care on a regular and recurring basis. The use

of Combat medics bolsters training while building manpower resources within our healthcare system.

Additionally, the majority of military medics have some form of civilian certification (EMT-B, EMT-P, FP-C, CCP-C, and so forth) in addition to the military training. While this may provide a framework for their functions and duties, the civilian constraints do not apply to the military combat environment, which is where our medics have proven most valuable. Despite EMT-B limitations, the scopes of battlefield functions are broader when functioning under TCCC guidelines. This must be considered when addressing their scope of practice at the garrison military hospitals.

Limitations

This study has several limitations that must be considered. First, this data set was only obtained at one MTF. This MTF consists mostly of junior Soldiers and their families, who may have different perceptions than those at facilities that have more senior ranking Soldiers and a higher retiree population. Second, the study was voluntary, so self-selection may have occurred on the part of those surveyed. Last, patients or accompanying adults completed the surveys during their time in the ED. Despite assuring respondents that the survey would not affect their care, the presence of uniformed personnel may have inadvertently affected responses.

Conclusions

Patients support Combat medic use during clinical care. Patients agree that Combat medic use should be a core mission for MTFs. Further research is needed to optimize Combat medic integration into patient healthcare.

Disclosure

We have no conflicts to report.

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