

An Ongoing Series

Role of NATO Special Operations Combat Medics in Special Operations Surgical Teams

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ABSTRACT

Battlefield medicine is constantly evolving. Wound patterns, terrain, weapons, and medical evacuation change, so surgical capabilities must adapt. With the changing environment, we must evolve by adapting to offer the best practical care, closest to the frontline. The golden hour has never been a magical number, and the most successful care is provided by the most advanced practitioners as close to the point of injury as possible. The proper placement and access of surgical teams are a key factor in access to a casualty within minutes. NATO Special Operations combat medics (NSOCMs) are highly trained medical Operators who can work as a force multiplier, not only to the Special Operations elements in which they serve but also as members of a Special Operations surgical team (SOST), and these Soldiers can provide the essential skills necessary to best employ and support the surgical asset.

KEYWORDS: *military medicine; environment; NATO Special Operations combat medic; NSOCM*

Introduction

Over recent years, the necessity for a higher provision of care of wounded combatants within Special Operation Forces (SOF) occurred due to the adaption of damage control theory and the character of low-intensity conflict. Advanced medical training for nonmedical personnel developed rapidly during the past two decades and has culminated with today's NSOCMs as well as mobile assets such as the SOST concept with an overall objective to minimize the preventable deaths on the battlefield.

NSOCMs are trained to a specific scope of practice, and they must be able to treat specified medical emergencies in austere environment within this scope, even if for a prolonged period of time.¹

SOSTs²⁻⁹ have the unique mission to perform Advanced Trauma Life Support, surgical stabilization, and limited postoperative critical care in support of Special Operations. The presence of those teams on the battlefield has additionally created more confidence and more capability to SOF commanders and

teams that will undertake missions with higher risk knowing that advanced care is present.

The goal of this report is to present research and facts proving the opportunity and worth of an NSOCM to be a member of a SOST, the necessity of both capabilities within the medical chain of Special Operations for all countries, and the synergy possible in both medical care and operational contribution when accomplished.

The hypothesis here is based on the consideration stated: *What capabilities are already present that can be used to create a more efficient asset?* As Andre Leiber, a German military surgeon stated: "What is now possible, what is now impossible, what is possible in the future, what is necessary to do for the best level of care for injured operators in absence of role 2 MTF for some hours."

There is a role for an NSOCM on a SOST, and there is a necessity for both to be studied for team potential. I cite existing knowledge and attempt to fill in the gaps by providing solutions and benefits with an overall outcome, which has nothing more than the simple goal of saving lives on the battlefield.

Research Method

The findings were constructed by interviewing SOST personnel, NSOCMs, and medical professionals throughout Europe and the United States. Research was conducted through published works on the subject of Special Operations combat medics and mobile surgical teams for initial analysis, and then questionnaires were sent to identified personnel with exceptional expertise and experience supporting Special Operations in the austere environment with a mix of roles. Personal interviews were then conducted after receipt of the returned written questionnaire for greater detail and perspective.

Background

Studies and lessons learned from the recent battlefield experiences showed that SOCMs have worked as the force multipliers providing the teams with expanded therapeutic capacity

and as the medical planning consultants for any SOF operation. These attributes alone, with the mix of proximity of surgical support provides great synergy and efficiency for the first hour from the POI. The International Special Training Center (ISTC) in Pfullendorf, Germany, developed the NSOCM course in 2015 to provide highly trained medics throughout European Union (EU) countries. NSOCMs are cross-trained Operators to provide both capacity in operational manpower and medical knowledge with an advanced scope of practice to treat and sustain combat trauma in an austere environment.

According to *Finland's Special Operation Surgical Team in Action*,³ countries like Finland have already met the necessity of both highly trained medics and surgical teams culminating with the integration of the first NSOCM from the Nordic training course during the first Finnish SOST deployment in spring 2016 to Operation Inherent Resolve in Iraq.

Hypothesis Analysis

Team Leader

When we consider the SOST either tactically or medically, both dynamics require quality leadership. An NSOCM could provide great skill and experience when it comes to tactics, techniques, procedures, and personalities of the operational unit. His or her traits in communication, weapons handling, safety procedures, medical planning, and leadership are critical and necessary for any Special Operations team. It is also important for the team members to have confidence with their team leader and his or her role as the tactical decision maker.

The prognosis for the “golden hour” theory is poor. The operating terrain is continuously changing, and the ability to have the perfect level of care on quick response MEDEVAC platforms is becoming more and more difficult. In an absence of an alternative, the goal is to position a SOST in the right place at the right time, optimally providing the patient an operating table 20 minutes from the POI. This is a very difficult goal to achieve. Therefore, it is essential for a SOST to have a team leader to operationally enable the team to achieve that challenging objective. As both medical planner and liaison between the SOST and the SOF element, the NSOCM is a valuable asset to the team's objective while at the same time minimizing risk.

A SOST has specific personnel requirements. Minimally, it requires at least a surgeon, an anesthesiologist, and an operational nurse. Those clinicians have the medical knowledge to support the medical mission of the team, but they lack tactical training, awareness, and necessary operational experience. As important as it is for an NSOCM to sustain his or her medical knowledge by cross training with the team inside a trauma center, the same priority exists for the medical experts to be trained and led in tactical procedures, weapons handling, and standard operating procedures, making them comfortable with discomfort. This is where experienced noncommissioned officer leadership can fill this important gap.

When a surgeon has a patient, he or she stands back, analyzes the facts, mechanism of injury, vital signs, and further exams so that he or she can have the overall image of the patient's situation before he or she intervenes. That is the same role of an NSOCM as the operational team leader in a SOST. The team leader is the member of the team who stands back from the

patient care so that he or she can have the overall image of the operational status and see the red flags in the mission. In this way, he or she creates a climate of safety for the surgeon to perform interventions without the pressure of tactical awareness.

Mass Casualty Triage

*SOST Saves Hundred During Deployment*⁴ profiled a US SOST who was deployed for Operation Inherent Resolve. This SOST team experienced 19 mass casualty events during a 2-month period. The report also notes a mass casualty experience of six casualties with trauma in the chest and abdomen and triaging them by using a handheld ultrasound device. A mass casualty is a stressful situation in which the team leader is also responsible for keeping the team functioning in organization, logistics, and evacuation.

The NSOCM medical skill set can contribute greatly in this challenge, providing excellent assistance in addition to the emergency medicine physician if necessary. The medics are extensively trained in many mass casualty scenarios during the NSOCM course and further adapted to use limited amounts of material and without access to advanced tools normally found in hospitals, especially during prolonged field care. Modern medical technologies like handheld ultrasound devices and portable electrocardiograms, are tools in which NSOCMs are additionally trained to use.⁸

Medical Assistant

*Experience with Prehospital Damage Control Surgery in Modern Conflict – Results from SRT*⁵ reports a documented team resuscitation interventions table (Table 1) in which there are all the initial interventions delivered by the surgical resuscitation team in 173 patients in the past 12 years.

According to the NSHQ Medical Standards and Training Directive 75-001,¹ Annex B, the NSOCM Critical Task List is a defined scope of practice of more than 150 capabilities and interventions. Damage control resuscitation, among others, is one of the capabilities of a Special Operations combat medic.

In addition to the role of the team leader, an NSOCM is a valuable asset not only for his or her tactical background but for his or her medical knowledge and scope of practice. We can make the assumption that the skills exist for an NSOCM to perform and support damage control resuscitation inside a SOST.

However, there are more tasks than resuscitation that the SOST has to perform. As a SOST member stated, “A SOST has to deal with what is happening inside the cage”—surgical interventions that require far greater skill than the scope of practice of an NSOCM.

SOSTs have existed for many years (the first FMST was developed in 1995, and the first Air Force SOST was established in 2002),² but as Michael Hetzler said during his interview, “Having an NSOCM is the most flexible part of the team, and flexibility is key to keeping the team low in numbers and high in mobility.”

As in all the operations, planning is in accordance with the PACE algorithm, meaning that you need redundancy in planning to cover the worst-case scenarios. An NSOCM can fill the role of medical assistant in any primary, alternate, contingency,

TABLE 1 Documented Team Resuscitation Interventions (N = 173 Human Casualties)

Intervention	n (%) [*]
Any IV access	88 (50.9)
Central venous access	15 (8.7)
IO access	2 (1.2)
Any airway intervention	51 (29.5)
Endotracheal intubation	50 (28.5)
Cricothyrotomy	1 (0.6)
Thoracostomy tube	16 (9.2)
Splinting	12 (6.9)
Whole blood administration	6 (3.5)
Mean whole blood units, n	3.3
Packed RBC administration	36 (20.8)
Mean packed RBC units, n	5.2
Thawed plasma administration	19 (11.0)
Mean thawed plasma units, n	5.6
Fluid- or blood-warming device	10 (5.8)
Drug administration	
Fentanyl	32 (18.5)
Versed	19 (11.0)
Ketamine	19 (11.9)
Morphine	27 (15.6)
Tranexamic acid	4 (2.3)
Antibiotics	46 (26.6)
Other medications (i.e., paralytics, antiemetics, or NOS)	58 (33.5)
Patient warming interventions (external or internal)	28 (16.2)

Abbreviations: IV, intravenous; IO, intraosseous; RBC, red blood cell; NOT, not otherwise specified.

^{*}Blood product use reported in No. of units.

Source: Dubose et al.⁵

or emergency treatment plan. There is not a function within a SOST in which an NSOCM cannot assist at the operating table when necessary once properly integrated. He or she is, and can be, the medical force multiplier of the team.

Far more important in the success of a SOST is the task of organizing the roles and functions based on the skills of the team members, to promote the best efficiency in teamwork.

At this point we will lay out an example and a statement that specifically address the role of an NSOCM as support in primary planning. There are EU countries that have not yet developed SOSTs, for which specific medical professionals, such as surgeons, anesthesiologists, and emergency medicine physicians, are required. And working in conventional environment, inside the safety that a hospital provides, is very different from working in an abandoned house under fire or on board a moving platform.

The tactical environment requires specific skills, and the personnel of a SOST need to possess those skills. When the question, “Who would you decide to train for a SOST—a nurse or an NSOCM?” was posed to the experts, the responses provided the same conclusion: *Train the NSOCM to specific skill sets like instrument handling, surgical first assistant skills, and preoperative and postoperative skills and management.*

As a member of a SOST said: “It is much easier to train an NSOCM [in] the necessary skills to perform as an operator

assistant than the other way around. Cross training with the team and the procedures on the operational table is the key for utilizing the NSOCM as the first assistant.”

Kyle N. Remick, MD,⁶ states that 18D and SOCM are members of the team, especially in Special Operations.

Additionally, according to *The Golden Hour Offset Surgical Treatment Team Operational Concept*,⁷ the GHOST concept was created from FST personnel, using small teams of five to seven providing mobility to jump forward with SOF, security assets, even with MEDEVAC platforms, and establish triage and operating areas to support the mission with resuscitative and surgical care. GHOST have two team loadouts: a light and a heavy package for flexibility. The makeup of the teams is shown in Table 2.

TABLE 2 Team Composition

GHOST Light Team (5 or 6 members)	GHOST Heavy Team (7 members)
1. Two surgeons – 01 surgeon	1. Two surgeons
2. One CRNA	2. Two CRNAs
3. One surgical technician	3. One surgical technician
4. One nurse	4. One nurse
5. One medic (68W)	5. One medic (68W)

Creating a SOST can also serve as a developmental effort for national needs in operational surgical support close to the Special Operations teams. One of the most difficult objectives is to have a surgical asset ready for operating 20–30 minutes from POI, and these proficiencies can provide the expertise to evolve war surgery employment nationally.

Using the NSOCMs as a member of a SOST—not only as a leader but also as a medical assistant—is not a new concept but, as already mentioned, this report is based on the following statement: *What is now possible, what is now impossible, what is possible in the future, what is necessary to do for the best level of care for injured operators in absence of Role 2 MTF for some hours.*

Conclusion

After consideration of existing literature and analyzing the results from the interviews, the following conclusions were reached.

The primary role of an NSOCM in a SOST is to be the operational team leader. Certain requirements need to be taken in consideration—maturity, ability to work as a team member with more advanced medical expertise personnel, prior combat experience in Special Operations, leadership and planning skills, proficiency in medical skills with potential, and modesty to learn beyond scope of practice for contribution to the team. Tactics and treatment can be in conflict; it is critical to have an experienced medic as the tactical leader to understand and possess the overall view.

- The role of the NSOCM as a surgical assistant was the most interesting and challenging consideration to analyze. In this unrecognized territory multiple opinions were brought forth. The skill set of the NSOCM is very good, but if we need to use an NSOCM as a primary

assistant on the operation table “without downgrading the team in medical knowledge” due to lack of personnel, there are specific things that should be accomplished:

- The majority expert suggestion was the creation of a 2-week SOST module for NSOCMs to cover the following topics:
 - o Surgical first assistant skills, instrument handling, familiarization with trauma procedures, live tissue training, nursing skills, and preoperative and post-operative requirements. Additionally, the SOCM must cross train with the team in all the procedures and become familiarized with how the team surgeon works and how every member of the team works.

The goal of this research was to provide options for greater efficiency, economy, and synergy for challenges that exist. A shortfall normally exists when a nation begins creating a SOST or when a SOST evolves their PACE planning in all respects. The level of success in an operation is strongly associated with planning for the “worst case scenario.”

We can say that battlefield medicine is primarily the “medics arena.” NSOCMs are trained to save lives in the austere environment. The SOST concept saves lives around the world with great success until the recent change of battlefield dynamics. *SOF Truths for Special Operations Surgical Team*¹⁰ states that one of the SOF truths is “Humans are more important”—the right people, highly trained, and working as a team.

Acknowledgments

Special thanks to Michael Hetzler, for his support and help in writing this article—without his valuable guidance this research paper would not have been possible. Also, gratitude to the following medical experts for their invaluable contribution: Mr Andre Lieber, MD, surgeon; Ms Linda Benevides, MD, surgeon; Mr Knut Isaken, MD, instructor at NSHQ SOST course; Mr Antti Lahdenranta, MD, surgeon; SMA Nick Graham, US Air Force SOST, IDMT, SOCM; Mr Peer Shultz, 18D/SOST team leader; CPT Tsouskas Ioannis, MD, surgeon; SGM Tony Stephens, US Ranger medic, SOCM; and Mr Nikola Ramundo, IITL physician assistant.

Disclosure

The author has nothing to disclose.

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Spring 2020
Volume 20, Edition 1

JSOM

JOURNAL of SPECIAL OPERATIONS MEDICINE™



THE JOURNAL FOR OPERATIONAL MEDICINE AND TACTICAL CASUALTY CARE

