

Ranger First Responder and the Evolution of Tactical Combat Casualty Care

SFC Cesar Veliz, NREMT; MSG Harold Montgomery, BA, NREMT; LTC Russ Kotwal, MD, MPH

In 1996, the article titled *Tactical Combat Casualty Care in Special Operations* was published as a supplement to the Journal of Military Medicine, the official journal of the Association of Military Surgeons of the United States.¹ This article altered the course of pre-hospital combat medicine into what we know today as tactical medicine. The authors brought to the forefront the vast differences between providing pre-hospital trauma care in the civilian setting and providing pre-hospital trauma care at the point-of-injury on the battlefield. Using data collected from Vietnam, and more recent conflicts such as the Battle of Mogadishu, the authors presented an alternative solution to providing tactical pre-hospital trauma care at the point-of-injury within the military and the Special Operations community.^{2,3}

Military pre-hospital providers were not provided with treatment protocols and interventions that were relevant to the parameters of actual combat or tactical scenarios.^{4,5} What is best for mission success and what is best for the treatment of casualties may be in direct conflict, a quandary completely unique to combat or tactical medicine.

The three goals of Tactical Combat Casualty Care (TCCC) are to treat the casualty, prevent additional casualties, and complete the mission. These three goals combined mission tactics and medical care into recommended guidelines and protocols for a standard of care to be provided in the battlefield setting. The publication of the TCCC article in 1996, coupled with a Regimental Commanding Officer (COL Stanley McChrystal) directive for all Rangers to focus on four priorities in 1998, provided the necessary spark needed to refine the Combat Lifesaver (CLS) program and develop it into the Ranger First Responder (RFR) program of instruction in 1999. The RFR program continues and is updated regularly to reflect lessons learned during the conflict over the past decade as well as recommendations from the Committee on Tactical Combat Casualty Care and the U.S. Army Institute for Surgical Research.

The “Big Four” are the most important areas of command emphasis for all Rangers and are comprised of marksmanship, physical training, medical training, and small unit tactics. In 2006, the “Big Four” became the “Big Five,” when mobility was added to this list of priorities. The emphasis on medical training incorporated in the “Big Four” afforded the opportunity for medical personnel from the 75th Ranger Regiment to use the new TCCC guidelines and apply them to the CLS program, the Army standard at the time for non-medical “first-aid” care. TCCC guidelines and protocols focus on the care of casualties in a combat or tactical environment at the point-of-injury. RFR is a program of instruction that incorporates TCCC and better prepares non-medical Rangers to provide self-aid or buddy-aid in the absence of a medical provider. The RFR course uses a combination of didactic and hands-on instruction which culminate in an application of skills during scenario based trauma lanes. Although RFR has grown to include eight critical steps, the emphasis is still on the treatment of three preventable combat deaths; massive extremity hemorrhage, tension pneumothorax, and airway obstruction.^{2,6} The idea is that a Ranger doesn’t need to be able to perform surgery, but rather he should be a master of the basic treatment for these three medically preventable causes of death within the guidelines of TCCC.

The mastery of these critical skills can truly make a difference in the survivability of casualties on the battlefield. The number one medically preventable cause of combat death is hemorrhage from an extremity wound. Most casualties who have died on the battlefield have done so within minutes of being wounded.² Ranger First Responders are taught to immediately control bleeding and apply a tourniquet when confronted with massive arterial bleeding from an extremity wound. Controlling the bleeding first, with aggressive application of a tourniquet when needed, is in contrast to historical civilian medical protocols. Civilian protocols have traditionally taught managing the airway first and then moving on to breathing and circulation concerns. When presented with massive arterial bleeding, a secure airway is inconsequential if there is no blood left in the body to transport the oxygen being provided by a properly managed airway. Thus, controlling the bleeding first is a vital intervention that saves lives on the battlefield and as such is meticulously rehearsed and reinforced during RFR training.

After controlling the extremity bleed with a tourniquet, Rangers are taught to use hemostatic dressings and pressure dressings. Hemostatic dressings are impregnated with chemical agents that assist with the human body’s natural clotting factors. Along with the tourniquets and other medical supplies and equipment used by Rangers, hemostatic dressings continue to evolve and change as medical research improves and refines these medical technologies. The emphasis on controlling bleeding within the 75th Ranger Regiment is also apparent in internal standard operating procedures as every Ranger has been directed to carry a Bleeder Control Kit in a standardized location on their body. This allows the casualty or other first responders to easily locate and apply a tourniquet, pressure dressing, or other intervention as required and ensures that medical supplies are appropriately distributed and readily available to all who are wounded. This standard operating procedure was mandated by the Regimental Command Sergeant Major (CSM Michael Hall) in 2000, and was the precursor and a model for the Army’s current Individual First Aid Kit (IFAK). Also at that time, the Regimental Command Sergeant Major directed that the Bleeder Control Kit contain the Ranger Casualty Card in order to document pre-hospital

injuries and care rendered. The Ranger Casualty Card was the precursor and a model for the Army's current Tactical Combat Casualty Care Card, DA Form 7656.

The second most common medically preventable cause of combat death is a tension pneumothorax which is a pressure that accumulates within the chest cavity that affects the lung and vital organs. RFRs are taught to manage this injury by applying an occlusive dressing to the entry and exit wounds. They also learn to assess for the signs and symptoms of a tension pneumothorax, and if present, to perform a needle decompression of the chest. A needle decompression procedure entails using a 14 gauge, 3.25 inch long needle catheter to pierce the chest wall and provide immediate decompression of the chest cavity, allowing the lung to properly inflate and taking pressure off of the vital organs. Although not the definitive treatment for a tension pneumothorax, a needle chest decompression is a simple procedure that can immediately relieve the build-up of pressure in the chest cavity and buy time for the casualty to survive and be evacuated to the next level of care.

The third most common medically preventable cause of combat death is related to airway obstruction. RFRs are taught to manage an obstructed airway by using basic manual maneuvers and airway adjuncts. These basic manual maneuvers include simple movements of the head and neck in order to properly align the airway and provide adequate air movement. Airway adjuncts like the nasopharyngeal airway are used to help facilitate the airway by preventing the tongue from blocking the air passageway. Along with the ability to assess a patient's airway for patency, RFRs are taught to use critical thinking in order to determine the best treatment for a specific casualty.

The 75th Ranger Regiment provides 100% RFR instruction to all Rangers, from private to colonel, upon initial assignment to the unit and annually thereafter for refresher training. In addition to this formal training, RFR is fluidly integrated into training exercises when possible as an integral component of battle drills that are being conducted.

In keeping with General Creighton Abram's Charter for the 75th Ranger Regiment, the RFR program has been exported to many units across the military over the past decade. Global implementation of TCCC training coupled with improvements in personal protective equipment have led to the highest casualty survival rate ever during operations Enduring Freedom and Iraqi Freedom.⁶

The 75th Ranger Regiment has been continuously engaged in combat operations for greater than eight years. As such, the Regiment has maintained a constant presence in Afghanistan since 2001 and Iraq since 2003. Although as of 1 April 2010, the Regiment has sustained a total of 419 battle injuries during this timeframe, to include 28 who were killed in action and four who died of wounds, none of these fallen Rangers passed away as a result of pre-hospital medically preventable causes.^{7,8} As the Ranger First Responder has often times been called upon to provide the initial care under fire to a wounded comrade, they have undoubtedly played a significant role in reducing Ranger morbidity and mortality on the battlefield.

Ranger First Responder is not just a medical program; it is the framework of a casualty response system that relies on a mastery and immediate application of basic and critical lifesaving skills by all Rangers.⁹ However, the success of the RFR program is directly related to line command ownership of the program. Thus, the line commander owns and is responsible for the pre-hospital casualty response system and all line personnel serve as the foundation for pre-hospital care on the battlefield. The RFR program provides the critical tools necessary for a Ranger to treat a casualty. Ranger leaders ensure this training is conducted to standard and is rehearsed and integrated into training events throughout the training cycle. The end result is an increase in Ranger survivability on the battlefield and a successful completion of the Ranger mission.

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