

Shifting the Paradigm: *Combat Casualty Care as a Top Training Priority*

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The Shot

“I know I’m going to meet death; evacuation is impossible.” These words, spoken by Mykhailo, a soldier in Ukraine’s 80th Air Assault Brigade, relay the horror of casualty response and evacuation in large-scale combat.¹ Walking wounded move alone to evacuation points. Frontline troops remain cutoff for days from medical care. Evacuation vehicles are easy targets and therefore never come. When soldiers attempt to move their wounded, they are targeted; the “lucky” ones often carry the wounded distances greater than five kilometers before being evacuated.

U.S. forces can avoid the tragedies befalling soldiers in eastern Europe through command prioritization, increased training, and pre-deployment preparation for casualty response, particularly of non-medical personnel. The Golden Hour has expired.² America’s close combat forces — those who close with and destroy the enemy — will die unless casualty response competency for non-medical personnel becomes a training priority for their units.³ Currently, close combat forces lack the proficiency required to conduct effective casualty responses, particularly when evacuation is limited or unavailable. There is no equivalent substitute for rapid hospital or surgical intervention of a critically wounded casualty. Frontline forces’ only recourse to mitigate a lack of access to higher care is to buy time for casualties with the skills to control bleeding, administer blood, and sustain life for prolonged periods.

The Wounding

Close combat forces own casualties from the point of injury through handoff to higher care, an expanding space of time on the modern battlefield. These forces and their commanders will be the ones who must face and solve this problem. It is incumbent upon them to rethink the casualty care paradigm.⁴

Larger casualty-producing incidents and restricted lines of communication will be the rule rather than the exception. The current Russo-Ukrainian war is replete with applicable examples of the limitations on casualty care and medical evacuation in modern war. The lack of maneuverability due to ubiquitous sensing, volume of wounded, and severity of



Soldiers in the Combat Lifesaver Course conduct training at the Fort Dix Medical Simulation Training Center. (Photo by the Fort Dix Training Support Center)

wounds have returned the character of casualty response to its World War roots. Close combat forces must be proactive in preparation.⁵

Pre-hospital casualty care is a tactical problem. While medics and fleet marine corpsman, battalion physicians, pararescuemen, and forward surgical teams will remain critical to casualty care, the close combat force will own the responsibility to “buy time — tip the scales” toward survival for critically wounded personnel in future conflicts. Effective casualty care preserves future fighting strength, buys time and space for transportation assets to focus on maneuver or sustainment, and maintains morale. Ineffective far-forward care degrades lethality, strains flexibility and freedom of maneuver, and decimates the will to fight. Close combat forces will be the ones to watch comrades linger for hours and die of wounds, hours or days later.

Blood loss is the number one cause of battlefield deaths.⁶ Lethal capabilities have become more complex over time, from swords and arrows to artillery and machine guns, to modern day improvised explosives and first-person view drones. However, uncontrolled hemorrhage from explosive penetrative wounds remains the most common lethal injury over the last century.⁷ Improvements to combat casualty care during that same time, such as freeze-dried plasma, the combat application tourniquet, and combat lifesaver training,

have saved thousands of lives.⁸ However, if U.S. armed forces want to avoid Russian-level casualties as seen in the world's current large-scale combat operations, combat casualty care must be prioritized by close combat units.⁹

The Triage

The term Golden Hour has been applied to trauma care patients for almost a half-century and became the U.S. military's casualty care benchmark during America's global war on terrorism.¹⁰ The Golden Hour is a policy, not physiology. In 2009, Defense Secretary Robert Gates directed a medical evacuation (MEDEVAC) 60-minute mission completion time.¹¹ The policy enabled quicker intervention, leading to physiological stabilization. Casualties survived at higher rates because first responders, often not medically trained personnel, were able to stop bleeding, and medical personnel could administer blood or alternatives within 30 minutes of injury, either upon arrival or in flight.¹² Almost ubiquitous helicopter transport, made possible by air superiority and a relatively small theater of operations, further enabled lifesaving treatment. Any expectation to operate in the same manner during future large-scale combat operations (LSCO) is folly.¹³ This distinction between reliable air evacuation and lifesaving interventions is only exacerbated when considering the future impact of anti-access and aerial denial (A2/AD) capabilities on rotary transport and the expected exponential increase of casualties during LSCO.¹⁴ The standard must now be replicating MEDEVAC intervention capabilities organically within close combat formations.

Department of Defense and service-level efforts to modernize casualty care are many, and they run the gamut

of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy domains. Training for non-medical warfighters at the most basic level is watered down and subject to the command priorities of any unit. Training proficiency varies from unit to unit, frequency and pervasiveness of training are left up to service or unit standards, and no joint enforcement mechanism or evaluative system exists to assess and measure proficiency of non-medical personnel in casualty care.¹⁵ Department of Defense training frequency requires Tactical Combat Casualty Care (TC3) certification for all service members once every three years or within 12 months of a deployment.¹⁶ The Army requires Combat Lifesaver (CLS) training for at least one Soldier per squad or crew and recertification every 12 months.¹⁷ The Marine Corps Common Skills Training and Readiness Manual mandates specific casualty care tasks to be trained annually.¹⁸ The daily and weekly iterative "reps and sets" given to marksmanship, small-unit tactics, and physical fitness should be congruently applied to casualty response for non-medical personnel. The almost weekly (if not daily) prioritization of weapons and vehicle maintenance presents an ironic contradiction: meticulous care for the tools of war but lack of parity in preserving the lives wielding them.

Failure to prioritize casualty care training will manifest in several ways. Inability to stop hemorrhages will result in an unnecessarily higher died of wounds rate. Unfamiliarity with tourniquet conversion will result in avoidable amputations and fewer wounded returning to duty. A leader's ignorance of blood required versus blood available could lead to combat-ineffective formations as donors are exhausted. In its most visceral form, the cost of casualty care incompetence

is the difference between unnecessarily marking casualties as expectant (going to die) or managing a casualty collection point for future evacuation.

A Patient Case Study

One of the more well-known and exemplary models prioritizing casualty response training for non-medical personnel is that of the 75th Ranger Regiment. As regimental commander, then-COL Stanley McChrystal's Ranger Regiment utilized a "Big Four" model for training prioritization, a practice still in place today.¹⁹ The priorities are physical fitness, marksmanship, small-unit training, and medical training. The medical training evolved with time. Ranger First Responder (a CLS analogous competency) for every Ranger is mandated; training includes a Ranger O Low Titer (ROLO –



Combat medics with 81st Stryker Brigade Combat Team triage patients during a training exercise on Joint Base Lewis-McChord, WA, on 6 August 2023. (Photo by SSG Adeline Witherspoon)

walking blood bank) capability, and the Advanced Ranger First Responder Course (teaching non-medical Rangers to assist with blood collection and cricothyrotomy) occurs annually in each battalion.²⁰ In the past, the training included casualty response training for Ranger leaders, teaching them to help medical personnel make triage decisions, manage combat medic task overload, leverage other trained personnel, and prioritize medical supply usage.²¹

Command prioritization of casualty response training yields results. From 2001 to 2010, Ranger Regiment's killed-in-action rate of 10.7 percent, died of wounds rate of 1.7 percent, and potentially survivable deaths rate of 3 percent were lower than the Department of Defense's average for all three statistics — 16.4, 5.8, 24 percent, respectively.²² In August 2019, this whole unit commitment to saving lives manifested in executing a rare "buddy transfusion" in rural Afghanistan.²³ Command prioritization, unit pre-deployment screening of personnel for universal donors, organizational stratification of donors on mission, and tactical combat casualty care proficiency enabled the regiment to conduct a point-of-injury whole blood transfusion.²⁴ The regiment achieved MEDEVAC and hospital capabilities organically within their formation and bought the required time for a critically wounded Ranger. Some conventional unit commanders also recognize the value of preparing and training for casualty response. In 2023, the 2nd Brigade Combat Team, 10th Mountain Division spent operations dollars to prescreen their formations for universal donors.²⁵ They identified over a third of the formation as universal donors, facilitating active walking blood banks at their outstations across Iraq, eastern Syria, and Kuwait. This should be the rule, not the exception.

The Treatment

Large-scale combat mass casualty events will overwhelm frontline military medical personnel. Commanders must prioritize organic lifesaving capacity at the lowest echelons and train for these inevitable events. Close combat forces must organize themselves with the personnel, skill sets, and equipment to achieve all manner of hemorrhage control, blood administration, and prolonged care. Ownership and actions to address casualty-response capability must occur at the Army brigade or Marine expeditionary unit level and within each subordinate command echelon. Training, training management, unit capabilities, organizational preparation, and external evaluation are immediately adjustable domains that commanders can affect.

Training and training management are lights on the path to increased prioritization. Brigade and battalion training guidance can identify casualty response as a command priority, mandate increased training frequency, and identify specific training thresholds for units to accomplish. Every service member should be CLS qualified, know how to achieve vascular access, apply tourniquets, collect blood from a known universal donor, and have increased confidence managing junctional hemorrhage by wound packing, pressure or hemostatic dressing, and potentially junctional tourniquets.



A U.S. Navy hospital corpsman conducts a blood draw on a simulated casualty during a Valkyrie blood transfusion demonstration during Marine Aviation Support Activity 24 at Fort Bonifacio, Philippines, on 12 June 2024. (Photo by LCpl Jennifer Sanchez, U.S. Marine Corps)

Training programs of instruction like CLS, Ranger First Responder, and the Marine Corps "Valkyrie" (Expeditionary Fresh Whole Blood program) should be promulgated and required of every service member annually.²⁶ Combat medic students in Advanced Individual Training (AIT) are already drawing and infusing real blood from fellow Soldiers. On 19 April 2022, PVT Kaleb Setliff became the first combat medic trainee in the history of the Combat Medic Specialist Training Program to take and infuse a unit of blood. He used a "walking blood bank" blood transfusion set to take one unit of blood from a fellow trainee and then gave the blood back to the same Soldier using a different arm. TC3 curriculum must include blood collection training for all service members and familiarity with assisting a medic or corpsman in blood administration. Conducting emergency medical technician (EMT) and cardiopulmonary resuscitation (CPR) certification, shadowing emergency room physicians, or making patient rounds with nurses in a hospital may offer competency and experience in casualty response and prolonged care.²⁷ More importantly, these experiences and certifications will offer confidence and familiarity, providing service members

with opportunities to gain comfort around the sick, injured, and dying. Soldiers and Marines with duty-limiting injuries can better manage their time assisting in clinics or in Role 1 facilities rather than conducting non-developmental tasks. Commanders must direct physicians to abide by the Joint Trauma System Tactical Combat Casualty Care curriculum and clinical practice guidelines. Commanders and physicians at the division level must ensure and enforce parity across their formations and, at echelon, institute external evaluations beyond mandatory training completion data.²⁸ Commanders need to be less risk-averse in medical coverage for training events. This would allow combat lifesavers and NCOs to provide medical coverage and authorize medics and corpsmen to pursue additional individual training opportunities.

Supplementing unit capabilities, every unit should have a walking blood bank program. Prolonged care is not possible without access to whole blood or blood analogs. Approximately 20 percent of the population has Low Titer O Whole Blood and are universal donors (not all O- blood is safe). In an infantry company of 136 people, this equates to 28 universal donors.²⁹ Unit operations funds for donor screening and socialization of the results between physicians and company first sergeants will enable training opportunities and lifesaving potential in the event of a severely hemorrhaging patient. Mitigating risk to leverage a walking blood bank capability is easily accomplishable; lab verification of screen results, administrative and physical identification of donors, and medic-conducted transfusion certification by a physician eliminate much of the risk. CLS personnel could assist in blood collection, allowing medics to focus on other injuries before blood administration.

Command-directed adjustments to unit organization could also set conditions to increase survival. Once universal donors are identified, they can be stratified across formations (assuming rank, position, and role parity). If one squad has two universal donor riflemen and another has none, move one of them. Units already designate special teams for enemy prisoner-of-war searches, demolition duties, and aid and litter for carrying casualties. Creating new special teams for walking blood bank or casualty collection point augmentees would lessen the cognitive burden on leaders, medics, and physicians needing assistance in a mass casualty event.

External evaluations and training center rotations can give commanders at echelon immediate and succinct feedback on their unit's abilities. Treated like a deployment, units should prepare for these evaluations by conducting donor screening, training their personnel to conduct walking blood banks, and arriving with transfusion kits. Evaluators can adjudicate extending casualty life if a unit can demonstrate whole blood transfusion competency. Casualty cards used during this training can be updated to account for patient expiration timelines before surgery, how much blood they require to sustain life, and how much additional blood would be required during prolonged care. Units can train triage decisions — a single severe hemorrhage casualty can require enough blood to incapacitate an entire platoon (assuming you have that many

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donors) — how does an organization determine if the mission or saving a life takes priority? Units must stress their abilities to manage a casualty collection point for up to 12 hours and hold and care for a patient at Role 1 for up to 72 hours.

Return to Duty

The primary mission of the close combat force is to close with and destroy the enemy. To prioritize anything over that purpose is missing the point. Combat casualty care proficiency is a key enabler of the primary mission. Units that can care for their wounded efficiently and competently will buy themselves greater lethality, fewer logistical constraints, and a more steadfast will to fight. To execute the primary mission, close combat forces must be proactive in establishing more robust medical capabilities, now. Commanders must prioritize an organic casualty care capability. Training that capability to save as many as possible and to sustain life when evacuation isn't possible will require preparation, consistent and iterative effort, and increased proficiency for non-medical personnel.

The days of calling a helicopter in for a single amputee in uncontested airspace are over. Close combat forces must be able to control hemorrhage, administer blood within 30 minutes, and prolong care when medical personnel and evacuation platforms are limited or unavailable. The means to accomplish this capability are present but require prioritization and command oversight. Casualty response capabilities must have parity with physical fitness and tactical proficiency in the eyes of warfighters. Close combat forces have the most to lose from a lack of a casualty response capability but also have the most to gain. Preventing loss of life and limiting the severity of an existing trauma is the surest way of returning warfighters to the fight so they can win.

Notes

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As with all *Infantry* articles, the views expressed are those of the author and not necessarily the Department of Defense or any element of it.



Medics assigned to the 2nd Battalion, 3rd Infantry Regiment conduct tactical field care training in the Republic of Korea on 23 January 2025. (Photo by PFC Christopher Antwine)